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The Journal
of the
South Carolina Medical Association

VOLUME LV January, 1959 NUMBER 1

PROBLEMS IN EDUCATION FOR GENERAL PRACTICE

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Tonight I would like to spend a few minutes with you on the relationship of medical education of family physicians. Specifically I'm concerned about the educational problems created by the rapid progress we see each year in modern medicine. For the most part, this trouble is rooted in educational methods that lag behind the dynamic surge of medical advance.

It is only natural that progress will beget problems. I think you will all agree that one of the most important factors in the founding of the American Academy of General Practice was the need for continued education at the postgraduate level. It was a challenge—one that I believe has been well met. Similarly, a continuing Academy aim is to be constantly on the alert for approaching problems—to anticipate them—and to act before a situation develops.

We all know that the more we learn about saving lives and about new ways to treat human illness, the more difficult it becomes to educate family doctors. There was a time, not too many years ago, when a man could complete an education by struggling through the right books, listening to some instructive lectures and having enough self-confidence. This era ended when doctors stopped using herb medicines and learned that the human body is a complicated piece of machinery.

At about the same time, medical education stopped being a hit-or-miss experience. We began to weed out the charlatans and fly-by-night cultists. We realized that a doctor needs years of intensive training and that he can never hope to know everything about the delicate arts of diagnosis and therapy. Some of the more enlightened educators even began to talk about preventive medicine.

Since that era, medicine has made fantastic progress. Many of you had front-row seats and have been privileged to watch this miracle. What once constituted medical learning for a father is now inadequate for his son. In particular, today's spotlight is on graduate education and the internship. As each medical advance is recorded, the internship becomes a greater block in the continuity of an educational program. It's caught in a squeeze from progress in training methods at both the undergraduate and graduate levels.

Twenty years ago, the internship was a perfect vehicle to provide the basic experience needed to supplement the academic climate of the medical school. Nowadays, the medical student is introduced to clinical work as a clerk in his third year of undergraduate study. In this capacity, he experiences the same elementary procedures that gave value to the internship.

At the graduate end of the scale, the general

Dr. Jackson's address was given at the Tenth Annual Assembly of The South Carolina Chapter of the Academy of General Practice—Clemson, S. C. October 9, 1958.

Dr. Jackson is President of the Academy of General Practice.

practice residency more than preempts the remaining value of interning.

Along with many Academy members who have spent countless hours studying the problem, I believe the logical solution is to combine the present undergraduate program with a two-year graduate residency. This single step would provide continuity in the education of tomorrow's family physician.

You may ask why not keep the internship and add the residency? My answer is for you to picture yourself as today's student preparing for general practice. As a clerk he is introduced to clinical work. He enters an internship—finds himself at the bottom of the ladder —and begins again. Is it any wonder that it is difficult to induce him to spend two additional years in a residency? For the third time he is faced with the necessity of starting over. Combine this with the fact that almost every graduate must complete two or more years of military service and it becomes obvious that such a program has little appeal. It's far easier for the young doctor to enter practice, even if he would prefer to have the advantage of a residency.

On the other hand, here are some advantages offered by a two-year general practice residency when combined with four years of undergraduate work.

1. The residency offers a program designed to fit the demands of medicine in 1958, not 1932.

2. It allows the young physician a chance to grow in both responsibility and status as he learns.

3. Practicing as a hospital resident gives the modern graduate a needed opportunity to prove his ability. Once this is done, it is more likely that he will have the hospital facilities available to him when he enters private practice. Practice in a hospital provides associations with other physicians and an opportunity for study and for consultation with more skilled or experienced colleagues. All these factors are essential to continued advancement in the art and science of good medical practice. What would this residency program include?

At least three Academy commissions and committees are vitally interested in this question. The newest of these groups is the Committee on Minimum Uniform Standards of Education for General Practice, better known as the "MUSE" Committee. Members of this committee include the chairmen of three commissions:

The Commission on Hospitals
The Commission on Education
The Commission on Membership and Credentials.

The Academy's representative on the General Practice Residency Review Committee is also on one of the nine MUSE members. Others include Academy representatives to the AMA's Committee on Preparation for General Practice.

These men, with their combined knowledge, experience, and study, offer the following recommendations:

The first year of a two-year residency should replace the internship. This experience would be educationally superior and would start as soon as the graduate receives his medical degree. The residency would conform with the *Essentials of Approved Residencies and Fellowships* published by the AMA's Council on Medical Education and Hospitals.

The first year of this residency should stress the diagnostic, therapeutic, psychiatric, preventive and rehabilitative aspects of general medicine and pediatrics. This would give the young doctor a base for further graduate training if he decided to specialize. The training received would be acceptable to all specialty boards and licensing agencies. Considerable emphasis would be placed on treating ambulatory patients.

The second year of the residency would provide four months of training in obstetrics and gynecology and four months of surgical training. The remaining four months would be left open for electives. If the general practice resident wants to do major surgery or handle the more complicated obstetric cases, he would need additional graduate training. However, the two-year residency would enable him to do minor and emergency surgery.

During these two years, the general practice resident would spend a considerable amount of time in the hospital emergency room. His surgical training would emphasize diagnosis as well as preoperative and postoperative care.

Every surgeon should be qualified and prepared to handle the pre and postoperative care of his patient.

For a moment I'd like to depart from the MUSE Committee sentiments and highlight a few personal convictions. It might be that four additional months of surgical training could replace the four elective months. With eight months of training, the resident should be qualified to do limited major surgery. He could then go into practice and be given an opportunity to prove his ability and work into a surgical training sponsorship plan.

The Academy is not alone in its awareness of the growing problems in education for general practice. There are many examples of others who see the growing need for changes in the educational structure to meet the enlarged demands of medical knowledge.

For example, look at the medical schools. Last year, 31 schools conducted special programs to give the student actual experience in clinical practice under supervision. Included were preceptorships with general practitioners, general medical clinics, and family care programs. More than one-half of the medical schools in the United States include family physicians on their teaching staff. This could be increased if there were more qualified general practitioners interested and willing to devote time to instructing and supervising students. Academy members have a tremendous responsibility to lead the way towards even greater participation.

Look at organized medicine. Through the combined action of the Academy and the American Medical Association the "Essentials of an Approved General Practice Residency" have been revised and expanded. A special residency review committee also has been established with representatives from the Academy and the AMA's Council on Medical Education and Hospitals.

The record speaks well, too, for hospitals and students planning to enter general medicine. There has been a steady increase in the number of programs and the quality of residencies. In 1955 there were 168 hospitals offering 638 positions in approved general practice residencies. Last year this number was up to 204 hospitals and 802 approved positions. Today, approximately 70 per cent of these positions are filled. Three years ago only 55 per cent were used.

Another indication of the increased interest in graduate training is the growing number of applicants for the Academy's Mead Johnson Awards. In the past, a grant made available by Mead Johnson & Company was presented to 10 outstanding young men as assistance towards the completion of a general practice residency. So great was the interest last year that the 1959 grant will make it possible for the Academy to provide financial aid to twenty young physicians during their graduate training period.

I think you will agree that these examples all point to a trend away from the internship.

I mentioned earlier that residencies provide a needed continuity to education. With this in mind, I also strongly endorse in-hospital sponsorship programs designed to further supplement the physician's education. Not only should the doctor have an opportunity to demonstrate his abilities and skills, he should have a chance to improve himself professionally.

Sponsorship programs should give the younger staff member the benefits that go with experience and can be readily passed along. The programs should be designed to let the staff evaluate the applicant's previous graduate work and offer additional training as a result of practicing under the guidance and direction of senior staff members. Through the close association inherent in this type of program, the sponsor can advantageously not only determine the technical ability, but the clinical judgment, professional maturity and ethical and moral responsibility exhibited by the young doctor.

And there is an additional advantage—a most important one. No time limits and rules automatically determine when a man becomes proficient. No patent formula steps in the way to say that this graduate is not qualified to handle a procedure today that he will be qualified to handle tomorrow. *Judgment is based on individual ability.*

I do not like to build castles in the air. I am keenly aware that there are many difficulties encountered in the establishment of

working sponsorship programs. Many will argue that it is not practical for the qualified, finished doctor—the doctor who has spent time and money for his know-how, to sponsor a program which will increase competition.

I think the AMA placement bureau figures on available openings for general practitioners aptly answer the question of competition. Today there are two positions waiting for each family physician seeking a location.

As far as offering help to another, that is a question each among you must settle for himself. Look back over your own career and I'm sure you can think of several who extended their fund of experience and knowledge to you when it was most needed.

The thought I have just expressed is equally applicable to preceptorship programs. I would like to elaborate on this important area. The preceptorship is a living link between medical school and the practice of medicine. It's an invaluable part of the doctor's total education. Only in-the-field programs let the young physician compare general practice with the many specialties. For the first time, he sees the patient as a person and as a living, breathing organism.

The key to the successful program is the preceptor. He must be a teacher, counselor and friend. He must want to learn as well as teach. He will at times find it difficult to keep ahead of his student who comes filled with new educational concepts and the latest his professors have to offer. This is a challenge but it is also a deeply rewarding experience. In a few weeks or months, the student learns that a doctor must be more than a competent clinician. He learns that medicine is more than a science or technique. I think that the planned preceptorship is one of the most important parts of the doctor's education.

I conclude with the hope that each of you here tonight will be more than just aware of problems confronting us in medical education. As physicians you have a challenge to take active part in preceptorship or sponsorship programs. As members of hospital medical staffs you can work towards establishing the general practice residency in the place of outdated internships. Keep up with the times. Prepare a positive program and you will have the earned respect of the profession and the public. This is a problem that can only be solved by the continued determination on the part of all physicians. We can't eliminate it by hiring a high-priced public relations agency. It's a problem that was born in our offices, medical schools and hospitals and it must be solved in these same atmospheres.

Therapeutic Skin Washing in Seborrhea and Acne Vulgaris. Kathleen A. Riley, M. D. (Charleston) Medical Times 86:973, August, 1958.

The value of therapeutic washing of the skin and scalp with a new surface active combination of detergent and wetting agents, formulated along with well-known, clinically proven drying and keratolytic ingredients has been evaluated in the treatment of seborrhea capitis and of acne vulgaris.

In fifty-seven out of sixty patients having seborrhea capitis significant improvement was obtained with the use of Fostex Cream shampoos.

Washing of the skin with Fostex Cream or Cake, as an adjunct to the usual treatment routine, contributed toward the amelioration of acne vulgaris in one hundred and forty-seven out of one hundred and fifty patients. These individuals had previously failed to respond to the same acne treatment regimen when the skin was washed with ordinary soap.

Sustained patient cooperation and acceptance of the therapeutic regimen were outstanding, and reflect the importance of thorough patient orientation and simplicity of methods of treatment in the therapy of these conditions.

EXPERIENCES WITH THE ARTIFICIAL KIDNEY

AT THE MEDICAL COLLEGE HOSPITAL

C. M. SMYTHE,** A. V. WILLIAMS,*** AND JOHN BUSE****
Charleston, S. C.

Extracorporeal dialysis in the treatment of acute renal failure has been used clinically for more than 10 years.[1] A coil dialyzing unit originally devises by Inouye and Engelberg and recently modified by W. J. Kolff[2] has been in operation at the Medical College Hospital since March of 1957. The purpose of this paper is to summarize the experience gained from sixteen dialyses of eleven patients and to report one unusual case.

The operation of the apparatus has been described elsewhere.[2] It was chosen from the models available because of its relative simplicity. In addition the coils and all accessory tubing and filters are available from a manufacturer packaged and sterilized. The unit is also relatively small. Its major disadvantage lies in the high resistance in the unit and the necessity for maintaining unphysiologically high pressures in it to achieve adequate rates of flow through the coil. The dialyzing area is large enough to obtain urea clearances of 78 to 130 ml/min. provided adequate perfusion rates are maintained.

Although multiple technical difficulties are met in the operation of the unit, it has appeared to us that these are less than with other effective pieces of equipment. Eighteen thousand square cm. of dialyzing surface are available in two coils wrapped in fiberglass mesh. Blood is perfused through the coils which are suspended in a 100 liter bath which is circulated over the coils. The composition of the bath is set out in Table I.

The most frequent indication for hemodialysis is acute renal failure, regardless of its origin (Table II[3]). Less frequent indications are chronic renal failure, acute poisoning, especially following the ingestion of large doses of salicylates or one of the long acting barbiturates, and rare miscellaneous causes. In chronic renal failure the major indication is to help a well stabilized chronic uremic patient through a period of stress such as an operation, injury or infection.

TABLE I
COMPOSITION OF DIALYZING FLUID (BATH)

	Component mEq/l.
Sodium	133
Bicarbonate	36
Potassium	5
Calcium	5
Magnesium	3
Chloride	110

pH 7.4
Dextrose 400 mg./100 ml.
Temperature 38°C

The only contra-indication to dialysis is the presence of a potential source of bleeding, especially in the central nervous system, the gastrointestinal tract, or a wound. The necessity for heparinization makes such a potential bleeding point hazardous.

Patients admitted to the Medical College Hospital with acute renal failure are placed on conservative medical management. In essence, this consists of (a) rigid restriction of all fluids to less than a liter a day, (b) total restriction of all proteins, potassium, and usually sodium, (c) the provision of a minimum of 100 grams of carbohydrate a day. On this regimen, in the absence of rapid breakdown of tissues, an oliguric or anuric patient can frequently survive until healing of the renal injury and spontaneous diuresis occurs. However, in a few patients the occurrence of severe hyperkalemia and symptoms of uremia indicate the necessity for dialysis. Of these, the most pressing indication is hyperkalemia. This may manifest itself either as a high blood level, as electrocardiographic changes, or as

*Supported by the Saul Alexander Fund and a grant from the South Carolina Heart Association.
**Assistant Professor and John and Mary R. Markle Scholar in Medicine.
***Assistant Professor of Medicine.
****Associate in Medicine.

profound weakness. A less definite but equally serious indication is an increasingly severe uremic syndrome. By this is meant acidosis, vomiting, tetany, pericarditis, and stupor. Convulsions may also be an indication for dialysis. As confidence in units of this type has increased it has become evident that hemodialysis is safe and less traumatic than allowing a patient to become severely uremic. Characteristically, most patients are in severe enough difficulty to need dialysis after ten days of anuria. In the group who are postpartum or who have their renal injury subsequent to some major trauma, this period is usually shorter.

TABLE II
A PARTIAL LIST OF CAUSES OF ACUTE RENAL FAILURE

(1) Shock	hemorrhage	
	wounds and surgery	
	crushing injuries	
	burns	
(2) Hemolysis	transfusion reaction	
	intra-vascular distilled water	
(3) Infection	pyelonephritis	
	"hepatorenal syndrome"	
	septic abortion	
(4) Hypersensitivity	acute glomerulonephritis	
	polyarteritis	
	lupus erythematosis	
(5) Obstruction	obstruction of ureters	
	intra-renal obstruction with urates or sulfonamides	
(6) Vascular	bilateral cortical necrosis	
	renal artery thrombosis or embolism	
	dissecting aneurysm	
(7) Nephrotoxins	bichloride of mercury	
	carbon tetachloride	
	sulfonamides	
	phosphorus	
(8) Water and electrolyte loss		diarrhea
		vomiting
		intestinal suction
		excessive diuretics

Selected from a large group of patients with acute and chronic renal failure admitted to the Medical College Hospital in the past year, 11 patients have been treated by 16 hemodialyses. (Table III.)

TABLE III

Indication	*Patients*	*Dialyses*	*Survived*
acute glomerulonephritis	4	7	1
transfusion reaction	1	1	1
tubular necrosis secondary to shock	2	2	1
hepatorenal syndrome	1	3	1
scleroderma	1	1	0
chronic uremia	2	2	2
	11	16	6

It is immediately apparent that some patients were dialyzed more than once. Although most tubular necrosis will heal in 8 to 12 days, some patients may go 21 to 36 days before enough regeneration has occurred to prevent the development of uremia. Also, as exemplified in the following detailed case report, development of hyperkalemia or uremia may be so rapid that dialysis may be necessary at frequent intervals.

A 34 year old Negress (MCH #12901) was transferred to the Medical College Hospital from the U. S. Naval Hospital, Charleston, on Jan. 8, 1958 because of anuria. She had been admitted to the Naval Hospital five days before in a stuporous condition. No history was available save what little could be gleaned from her. She was seven months pregnant (gravida VII, para IV). One month before admission there were symptoms of lower urinary tract infection for which she had been treated with Azo Gantrisin (Sulfisoxazole and Phenylazo-Diamino-Pyridine-HCL) for one week. The night before admission she had evidently had a seizure. Following this she became stuporous and accordingly was sent to the hospital. There was no history of an attempt to induce criminal abortion.

She was found to be a stuporous Negress who responded vaguely to questions. Her blood pressure was 200/110 mm. Hg., her pulse 114/min. She was afebrile. The sclerae were icteric. There was old blood in the mouth. The mucous membranes were pale. The arterioles of the ocular fundi showed diffuse and segmental spasm, but no exudate or hemorrhage. The heart could be felt 11 cm. lateral to the midsternal line. The liver and spleen were not palpable. An enlarged uterus filled the abdomen. No localizing neurological signs were present.

Her hemoglobin was 7.6 grams/100 ml., white count 10,300/cmm. with 59% polymorphonuclear cells, platelet count 40,000/cmm., reticulocyte count 2.4%, serum bilirubin 6.1 mg./100 ml., prothrombin time 39% of normal. Blood urea nitrogen (BUN) was 16 mg./100 ml., serum sodium 140 mEq./l., potassium 6.6 mEq./l., and carbon dioxide combining power 30 volumes %. The urine was black and contained no bile. Urobilinogen was present in a dilution of 1:160, and free hemoglobin was present in the supernatent fluid. The urinary sediment was normal.

The initial diagnosis was toxemia of pregnancy. She was placed on intramuscular magnesium sulfate. During the first eight hours in the hospital she passed only 120 ml. of urine, which was as described above. Subsequently the urine became loaded with red blood cells. Because of her apparent hemolytic anemia, she was started on adrenocorticotrophic hormone (ACTH) 50 units intramuscularly daily, and was given 2 units of packed red blood cells. Three days after admission to the hospital she delivered spontaneously a stillborn

infant after an easy and brief labor. However, she remained oliguric, became increasingly jaundiced, and progressively more stuporous. The BUN rose to 101 mg., and the serum potassium to 7.2 mEq./l. Also her reticulocyte count rose to 6.3%. Because of increasing uremia and the rise in her serum potassium she was admitted to the Medical College Hospital on the fifth day of her illness for consideration for hemodialysis. During the three days before transfer she had passed about 50 ml. of urine a day.

On admission she was a lethargic and confused woman lying flat in bed, unable to give a history. Her blood pressure was 160/100, Temp. 98.6°, pulse 84. The sclerae were deeply icteric. The ocular fundi were as previously described. The gums were bloody, and the breath foul. The heart was in the 6th intercostal space, 2 cm. beyond the mid-clavicular line. The abdomen was soft and distended, the liver and spleen not palpable, the uterus well contracted, the bowel sounds distant and high pitched. There was foul smelling lochia draining from the vagina. Rectal examination was negative. No localizing neurologic deficit was apparent.

The hemoglobin was 11 grams, the white blood cell count 32,000/cmm. with 87% polymorphonuclears, platelet count 81,000/cmm., reticulocyte count 7%, serum bilirubin 20 mg., BUN 75 mg., serum potassium 5.1 mEq./l., sodium 131 mEq./l., chloride 94 mEq./l., and CO_2 44 volumes %. The urine was loaded with red blood cells, contained 4+ albumin, and a 4+ reaction for bile. There was hemoglobin in the supernatent fluid.

The initial diagnosis was hepato-renal syndrome, presumably secondary to an eclamptic state. Parametritis was also suspected. She was treated with 750 ml. of 15% dextrose in water, and 60 units of intravenous ACTH daily. She was given 20 units of regular insulin before each intravenous infusion. Her condition deteriorated over the next three days, and on the eighth day from the beginning of her illness she was nearly comatose. Blood potassium was 7.3 mEq./l. The electrocardiogram showed definite changes of hyperkalemia. She was dialyzed for five and one-half hours on that afternoon. (Table IV).

TABLE IV
BLOOD CHEMICAL VALUES BEFORE, DURING, AND AFTER FIRST DIALYSIS, 1/11/58

	3:50 P. M.	6:40 P. M.	9:10 P. M.
Hematocrit reading (%)	34	36	33
Blood urea nitrogen (mg.)	198	135	111
Serum phosphorus (mg.)	8.6	7.5	6.8
Blood creatinine (mg.)	14.6	11.6	10.5
Carbon dioxide combining power (vol. %)	36	51	56
Serum chloride (mEq./l.)	76.6	80.2	78.8
Serum sodium (mEq./l.)	121	127.6	144
Serum potassium (mEq./l.)	7.3	6.0	5.4

She did not respond to this dialysis well. Her sensorium remained dull. She continued to ooze from many sites after a small dose of heparin. However, the electrocardiogram reverted to normal, and blood chemical values were more normal. She was started on penicillin.

Forty-eight hours later, or on the 10th day of her illness, she was again in critical condition, with a potassium of 7.7 mEq./l., and a BUN of 179 mg. She remained oliguric and as jaundiced as ever. An electrocardiogram showed hyperkalemic effects again, and the reflexes were hypoactive. She was dialyzed a second time that afternoon. (Table V).

TABLE V
BLOOD CHEMICAL VALUES BEFORE, DURING, AND AFTER SECOND HEMODIALYSIS JAN. 13

	4:00 P. M.	7:00 P. M.	10:45 P. M.
Hematocrit reading (%)	27	30	29
Blood urea nitrogen (mg.)	179	117	89
Serum phosphorus (mg.)	12.5	8.8	9.4
Blood creatinine (mg.)	13.8	10.0	8.3
Carbon dioxide combining power (vol. %)	38	51	61
Serum chloride (mEq./l.)	78.3	80.2	80.2
Serum sodium (mEq./l.)	127	141.3	135
Serum potassium (mEq./l.)	7.7	5.6	5.1

Once again the electrocardiogram reverted to normal, but she was hypotensive during most of this procedure. She had less oozing than two days previously and required more heparin to prevent clotting in the extracorporeal tubing. The next morning her sensorium was clearer, she was less icteric, and her condition was definitely improved. Over the next four days her urine output increased slowly from 15 to 275 ml. per day. Her serum bilirubin fell from 21 to 15.3 mg., and her white blood cell count fell from 53,600 to 39,600/cmm. However, she once again became hyperkalemic. A profuse, foul discharge from the vagina continued. On the evening of the 14th day a decision was made to dialyze her for the third time the following morning.

Early the next morning she was found to be comatose. An electrocardiogram (Figure I) showed very far advanced hyperkalemic effects. The serum potassium was 9.5 mEq./l. She was immediately given 35 ml. of 50% dextrose, 30 units of regular insulin, and 200 ml. of 3% saline intravenously. Serum potassium dropped to 7.9 mEq./l., and the electrocardiogram showed some improvement but remained grossly abnormal. Immediate preparations were made for dialysis. (Table VI)

TABLE VI
BLOOD CHEMICAL VALUES BEFORE, DURING, AND AFTER THIRD HEMODIALYSIS 1/18/58

	9:30 A. M.	1:30 P. M.	4:45 P. M.
Hematocrit reading (%)	23	26	26
Blood urea nitrogen (mg.)	205	140	98
Serum phosphorus (mg.)	22.8	12.4	9.5
Blood creatinine (mg.)	15.4	10.3	7.6
Carbon dioxide combining power (vol. %)	14	34	43
Serum chloride (mEq./l.)	77	85	83
Serum sodium (mEq./l.)	120	130	130
Serum potassium (mEq./l)	7.9	4.1	3.3

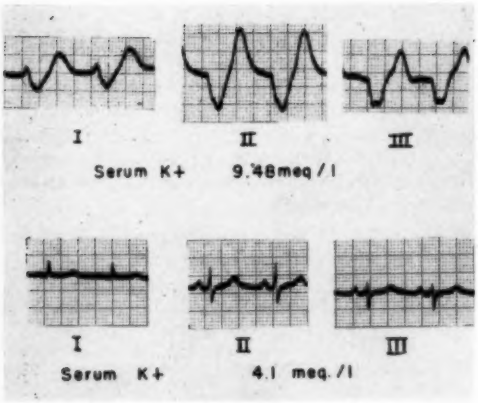

Figure I.

The upper tracing shows marked effects of hyperkalemia. Note the absent P-waves and the widely spread QRS complexes. The lower tracing has returned to normal after three hours of dialysis.

This six hour procedure was marked by many difficulties, both technical and in maintaining the patient's blood pressure. However, blood chemistries improved once again, and the electrocardiogram reverted to normal in three hours. (Figure I).

The following morning she was clear mentally, asked for something to eat and looked improved in every way. That day she passed 650 ml. of urine. Her convalescence continued slowly and uneventfully thereafter. Her jaundice cleared completely. Her hemolytic process cleared. Her blood chemical content returned toward normal. Her pelvic infection improved, and her appetite slowly returned. She was discharged from the hospital on the 31st hospital day, 36 days from the beginning of her illness, to continue her convalescence at home.

Six months later she was normotensive with no anemia, a normal blood urea nitrogen, and a clear urine. She was successfully caring for her children. Her only complaint is a slightly tender keloid in the scar from one of the arterial cutdowns.

Discussion

After the Medical College Hospital acquired a hemodialyzing unit, the primary concern was to find answers to a number of major and minor technical problems. These were successfully ironed out by practice experiments using dogs. Details of patient management again became the first concern. It was apparent that careful attention to fluid and electrolyte balances, close attention to electrocardiographic changes, and the frequent use of consultants were essential. The major problem has been over-loading these patients with fluid and sodium despite rigid fluid restriction. In an air-conditioned building or in winter 600 ml. of fluid per day will usually provide sufficient hydration for the anuric individual. This is especially true since many of these patients are already over-hydrated by the time it is realized that they have acute renal failure. The administration of 100 grams of carbohydrate a day may be difficult. Nausea and vomiting are major problems, and veins are at a premium. For as many days as possible the fluid and calorie ration is prescribed by mouth. The use of antiemetics such as promazine hydrochloride (Sparine) or prochlorperazine (Compazine) and careful attention to icing and flavoring of fluids frequently make oral feedings possible.

Timing of dialysis remains a recurrent problem. At first this group tended to wait until patients were in desperate condition. As experience became greater dialysis has been resorted to even when not immediately and urgently indicated. For example, a 15 year old boy was dialyzed for only three hours for the second time the 16th day after the onset of anuria from acute glomerulonephritis. This was done at the beginning of his diuresis to alleviate distressing symptoms of severe uremia. After a stormy illness he is now doing well, although left with chronic nephritis. On the other hand, after a transfusion reaction a young woman had become severely uremic by the 11th day when diuresis began. She remained very seriously ill, however, and did not recover sufficiently to be discharged from the hospital until 26 days following the onset of diuresis. In retrospect, her illness may have been shorter and less debilitating had she been dialyzed on her 8th or 9th day.

In contradistinction to preliminary expectations, diagnosis has remained a major problem in these cases. Not only has it been difficult to judge the exact etiologic agent causing acute anuria but even whether a patient has acute renal disease or not. Those cases of acute renal failure following acute trauma are simple enough to diagnose. However, in post-partum patients the differential diagnosis between tubular and glomerular injury may be difficult. This is of vital importance, for severe glomerular destruction is essentially irreversible.

In the so-called medical cases equally great difficulties arise. The need for a clear cut history is of paramount importance in establishing the presence or absence of preexisting renal disease. Eyeground changes, heart size, cardiac contour, electrocardiographic changes may help in differentiating an exacerbation of chronic renal disease from a case of acute renal disease.

Careful clinical judgement is necessary in evaluating the speed of progression of uremia. Hyperkalemic changes can develop quite suddenly. In our experience the appearance of convulsions has been a most ominous sign.

Another problem is to judge whether a renal lesion is reversible. Percutaneous needle biopsy of the kidney as used in Sweden is helpful. However, this procedure has been avoided in this country due to fear of bleeding should heparinization become necessary for dialysis shortly after biopsy.

Of four cases with acute glomerulonephritis who were dialyzed, two had irreversibly destroyed kidneys. The following case illustrates this hopeless prognosis in spite of dialysis.

A 19 year old produce market worker first noted bloody urine about three weeks following a sore throat. The urine volume became scant, and urine formation finally ceased ten days after the onset of hematuria. He was thought to have glomerulonephritis. On conservative therapy he did well. He was first dialyzed because of a severe uremic state 19 days after the onset of hematuria and after nine days of complete anuria. The dialysis was successful. Blood urea nitrogen dropped from 192 mg. to 106 mg., and the carbon dioxide combining power rose from 30 to 50 volumes per cent. He remained anuric, and eight days later he was again electively dialyzed. This procedure was again uneventful, and his blood urea nitrogen dropped from 207 to 109 mg., and carbon dioxide combining power rose from 30 to 49 volumes %. He remained anuric and uremic for eleven more days until he died suddenly of pulmonary embolism on the morning when a third dialysis was scheduled. His death occurred 38 days after the onset of his disease and after 28 days of complete anuria. At autopsy he was found to have acute glomerulonephritis with obliteration of all his glomeruli. With two hemodialyses he had been kept alive long enough to have his disease heal if it were going to. Further dialyses would not have improved his prognosis.

Summary and Conclusions

(1) The Kolff disposable dialyzing unit has proven to be a servicable and practical apparatus.

(2) Eleven patients have been dialyzed in the Medical College Hospital. Six patients have survived. Four of these had acute renal failure and all four are at present doing well. Of the five who died, three were examined by autopsy and were found to have irreversible kidney disease.

(3) Problems in the management of these patients are discussed.

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THE TREATMENT OF THERMAL BURNS

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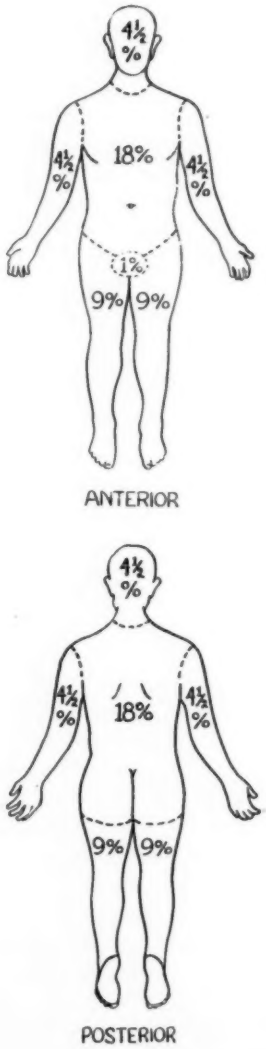
The treatment of thermal burns is a problem of great magnitude for which there is at present but a partial solution. The scope and complexity of the problem, however, do not justify a casual approach to the handling of these patients because this can only result in additional suffering, financial loss, disability, and permanent disfigurement. Francis D. Moore, Professor of Surgery at Harvard, points out that too often a doctor will say, "It's just a matter of taking care of the patient until it's time to graft, and then I'll call in a plastic surgeon."[1] He emphasizes that this results after two weeks in chronic anemia, avitaminosis, high fever with secondary infection, wounds not surgically prepared for debridement and grafting, and a frightened demoralized patient in constant pain and general ill health. Many patients who could be completely healed within three or four weeks by vigorous and persistant treatment are seen occupying hospital beds for months and even years. It is most important that energetic and aggressive treatment be initiated immediately and that the closure of this open wound be attained as soon as possible, eliminating a long period of chronic infection and debilitation.

The seriousness of a burn, apart from the specific anatomy involved and the state of health of the patient, depends upon two principle factors, (1) the surface extent, and (2) the depth of the burn. The surface extent can be estimated according to the rule of nines expressed in percentage of total body area.[2] (Figs. 1 and 2)

Much has been written on the subject of the fluid and electrolyte therapy of extensively and acutely burned patients. For detailed discussions of the complex facets of these problems, the reader is referred particularly to the prolific writings of Moore,[1] Cope,[5] Moyer,[8,9] Evans,[6] Artz and Reiss.[10] For the sake of brevity and clarity, the following discourse is based upon the authors' experience and is presented as a regimen which is both clinically successful, yet usefully simple.



Figures 1 and 2

Division of total body surface area according to the "Rule of Nines".

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The handling of a severely burned patient may be divided into three basic phases of treatment.

a) Acute phase—emergency treatment of shock, general supportive measures, and aseptic care of the wound.
b) Intermediate phase—maintenance of nutrition, electrolyte balance, and general supportive measures.
c) Definitive phase—definitive surgical preparation and grafting of the burned areas.

ACUTE PHASE (DAYS 1-3)

In the immediate care of the burn, the following procedures must be attended to:

1. History, physical examination, weighing of patient, and estimation of extent and depth of the burn.
2. Sedation, by intravenous route in severe cases because of poor absorption from the subcutaneous route in circulatory deficiency.
3. Procurement of blood sample for laboratory studies and cross matching through venipuncture followed by initiation of fluid therapy.
4. Insertion of polyethylene catheter in vein for prolonged fluid therapy.
5. Insertion of a Foley catheter into the bladder.
6. Administration of antibiotics and tetanus prophylaxis.
7. Initiation of fluid intake and output charting.
8. Performance of tracheostomy if damage to the respiratory tract is suspected as indicated by hoarseness, rales, coughing, rapid respirations, or cyanosis.
9. Insertion of a naso-gastric tube with continuous aspiration to relieve gastric dilatation, abdominal distension and vomiting in severe burns.
10. Cleansing of burned areas and application of sterile dressings.

Fluid therapy is given in direct proportion to the extent of the burn. As a result of tissue injury by exposure to high temperatures, vasodilation and increased capillary permeability give rise to edema. Vasodilatation is also associated with increased capillary hydrostatic pressure which, coupled with the increased capillary permeability, results in a shift of plasma proteins into the interstitial spaces of the injured tissue, lowering the osmotic pressure of the plasma. In this way edema increases until limited by tissue tension. In short, one may visualize the burned area as a sponge absorbing quantities of plasma from the circulating blood volume. This sponge-like effect is in direct proportion to the three-dimensional volume of the burn. The nature of fluid, plasma, protein, and electrolyte shifts have been extensively studied and discussed by Cope and Moore,[3,4,5] Evans,[6] and others. Further loss of erythrocytes and plasma into the interstitial space results from spontaneous reversible and irreversible intravascular agglutination (sludging) secondary to the application of heat to vascular channels.[7] Intensive intravenous therapy is usually required only in burns of more than 20% of the body surface in adults (10% in infants, and elderly or debilitated people). The successful early treatment of burns depends upon a reasonable estimate of the extent of the burn and the immediate prevention of shock by restoring to the circulation the fluids lost in the burned area.

In general, the clinical response of the patient to therapy functions as a guide in the modification of the formula. The major factors which must be considered are the blood pressure, the urinary output and specific gravity, and the hematocrit reading or hemoglobin. In regard to these major factors certain maxims aid in judging the adequacy of fluid therapy.

1. The urinary output is measured at hourly intervals and should be 25 to 50 ml. per hour for the first 48 hours in the adult. An output of over 100 ml. per hour indicates excessive intravenous replacement therapy.
2. If blood pressure and urinary output decrease, regardless of hematocrit or urinary specific gravity, increase in colloid administration is indicated; if necessary, the entire 24 hour calculated volume may be given in 12 hours, drawing upon the next day's supply to complete the first 24 hour period.

3. If the blood pressure is normal but the hematocrit reading is elevated, the urine output scanty (less than 25 ml. per hour) and unduly concentrated, then water or saline should be administered. If, however, the urinary specific gravity is low in such circumstances, organic renal complications or primary renal disease should be promptly suspected and investigated.
4. If oliguria persists organic changes producing renal failure must be considered and the fluid intake reduced.

On about the third post-burn day, there is a rapid return of the extracellular fluid into the general circulation as if the "sponge" were suddenly compressed. Therefore, fluid therapy is limited to replacement of the insensible loss and urinary output. If fluids are given in excessive amounts during the first two days, such an outpouring of fluids into the general circulation can result in pulmonary edema, especially in the young and the debilitated. This fluid mobilization stage is characterized by its diuretic manifestations.

Fluids are restored in accordance with a formula such as that of Evans:[6]

Colloids (whole blood): 1 ml. per kilogram of body weight for each percent of body surface burned in the first 24 hours.

Electrolytes (physiological saline solution): 1 ml. per kilogram of body weight for each percent of body surface burned in the first 24 hours.

Nonelectrolytes (5% dextrose in water): Minimal daily requirement, 2,000 ml. for an adult.

One-half of the fluid volume for the first day is usually given during the first eight hours. Half of the amounts of colloid and electrolytes given during the first 24 hour period is usually administered during the second 24 hour period.

A total of ten liters of fluid is never surpassed in one day's therapy. Calculation of fluids for a 50% burn is set as an arbitrary maximum. The formula is used only as an initial guide to management, being modified as needed by the clinical response of the patient to therapy. Colloid and electrolyte administration should be restricted to less than the calculated amount when there is significant pulmonary involvement because of the hazard of pulmonary edema. In addition, extra precautions must be taken in the administration of the electrolytes to patients with known cardiac or renal disease.

The dept of the burn is expressed in degrees: (See Next Page)

INTERMEDIATE PHASE (DAYS 4-8)

The primary concern of this stage of therapy is the initiation of a program of adequate alimentation. The essential features of such a program may be outlined as follows:

a. Whole blood transfusions — given as needed to maintain serum proteins and hemoglobin at normal levels.
b. Iron — in dosage of .3 Gm. of the ferrous salt three times daily.
c. Water-soluble vitamins — parenterally or orally, in the following dosage schedule:[11]

Ascorbic acid	—	1000 mg/day
Thiamin	—	50 mg/day
Riboflavin	—	50 mg/day
Nicotinamide	—	500 mg/day

d. Caloric intake — 50 to 70 calories per kilogram of body weight per day. Approximately 2-3 Gm. of protein per kilogram of body weight should comprise a portion of the total calories. The basal metabolism is elevated following extensive thermal trauma to +30 to +60 for as long as two months after the injury, thus necessitating an unusually high caloric intake to prevent body wasting.[12]

In severe burns, nothing is given by mouth for the first 48 hours. If the patient can take oral feedings at the end of this time, the oral route is preferred for both fluid and nutritional requirements. If the patient cannot tolerate oral feeding because of gastric atony or intestinal ileus, the caloric schedule may be adequately met for limited periods by utilizing intravenous alimentation, including 10% dextrose, intravenous Lipomul, and amino acid solutions. At no time should oral food concentrate be pushed to the point of anorexia or nausea.

DEGREE OF BURNS		
FIRST DEGREE	SECOND DEGREE	THIRD DEGREE
Hyperesthesia with erythema	Hypesthesia with blisters, blebs, partial skin thickness loss with viable islands in deeper dermal layers and skin appendages.	Anesthesia with chalky or charred full thickness skin loss; no viable islands in the deeper dermal layers and skin appendages.

DEFINITIVE PHASE (9th DAY TO COMPLETE HEALING)

The treatment of the open wound is the single most important factor in the rehabilitation of the patient. Our method of therapy is based upon several considerations. As a result of exposure to abnormally high temperatures, some epithelial cells are dead, some are damaged, and the remainder are viable. What the proportion of these three categories may be is frequently difficult to estimate accurately at the first examination. The cells necrotized by the burn form an excellent medium for bacterial multiplication. The infectious process overwhelms the damaged cells and brings the normal progress of epithelialization to a halt. An example of the progressive destruction of viable cells by infection can be seen at times in donor sites from which split thickness grafts have been taken. In but a short time a wound known to involve only a partial thickness of the skin (comparable to a second degree burn) can be extended by infection to a full thickness loss. Healing must then progress slowly from the few remaining islands of epithelial tissue or from the margins. This destructive potential of infection must be kept in mind in very deep second degree burns which may be satisfactorily epithelialized from hair follicles and other skin appendages situated in the deeper layers. Our plan of action, therefore, is to eliminate the necrotic cells as soon as possible, support the damaged cells in their return to normal, and encourage the proliferation of the living cells. The major threat to this program from the local point of view is infection. Brooks[13] *et al.* have reported in a large experimental series that burn wound infection was maximal on the tenth day; the hazard of infection, which was most consistently produced by streptococci, was markedly diminished by prophylactic antibiotic therapy. Blood cultures were positive for streptococci in 78% of cases between the fifth and seventeenth days after the burn.

With this concept in mind, the burn is dressed on arrival at the hospital on sterile sheets, using caps, masks, and sterile gloves. The burned area is gently washed with soft cotton soaked in Septisol solution (an antiseptic soap) and irrigated with sterile saline. The patient may be given morphine but not a general anesthetic. Children are given barbiturates by rectum to allay their fear. No vigorous scrubbing is allowed and blebs are left intact. The margins of burns involving hairy areas are shaved. Fine mesh rayon impregnated with nitrofurazone (Furacin) is applied to the burned area followed by a thick burn dressing of coarse gauze and Kerlix[14,15] (a dressing fabric). Should the burn involve the hand, the fingers are dressed individually and active motion encouraged. Tetanus prophylaxis and an antibiotic such as erythromycin are administered.

If the patient is in satisfactory condition at the end of about a week, he is placed in a tank and all dressings removed under water. (Fig. 3, 4). It is much less painful to float the dressings off in this manner and the disadvantages of a general anesthetic are avoided. The mechanical irritation produced by the removal of adherent dressings results in capillary or gross hemorrhage. This is obviated by the dissolution in water of the interface between the wound and the fine mesh rayon. In order to prevent bacterial cross-contamination, the bath solution is made up to contain one part per million of chlorine. The antiseptic properties of this solution are sufficient to cause

Figure 3

An electrically powered hoist is useful in transferring the patient from stretcher to water tank.

Figure 4

Dressings are allowed to "soak off" under water, aided by gentle traction after 15-20 minutes immersion.

death of most pathogenic bacteria in 15 to 20 minutes. Chlorine solution in this concentration is not toxic or irritating.[16] In addition, the tank and accessories are cleansed with Septisol between uses. At the time of initial dressing change, the extent of the burn is again estimated and a decision made concerning the advisability of surgical debridement under anesthesia or continuation of frequent dressing changes. If the burned area is covered by a thick eschar, surgical removal under general anesthesia is advisable. As much of the necrotic tissue as possible is removed in the tank and the patient is redressed with Furacin-impregnated rayon, three or four layers of coarse gauze (burn dressing), and is wrapped with wide bandage roll (Fig. 5). This dressing is then wet twice daily with .25% chloramine solution which is helpful in eliminating bacteria and hastening the dissolution of necrotic tissue. The thin dressing dries out between wettings, thus avoiding maceration of viable epithelium. In the case of adults, dressings are changed twice weekly in the tank, but children often require more frequent changes due to soilage. Any odor or discoloration of a dressing is a signal for its immediate change. This regimen is continued until the wounds are clean and ready for grafting as manifested by a pink granulating surface free of gross infection and exudation. Every effort is made to initiate grafting within two weeks.

When the necrotic cells have been removed, the damaged cells restored to vigor, and the living cells have commenced to proliferate, it is obligatory to close the open wounds as quickly as possible. This can be most effective-

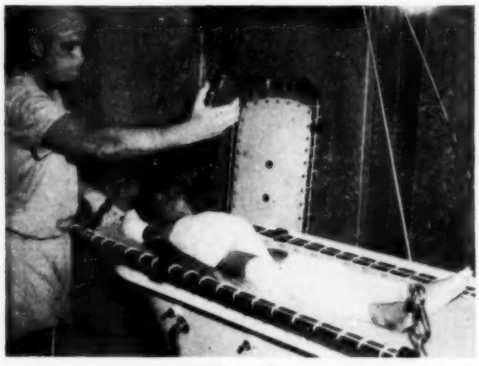

Figure 5

Patient is transferred back onto a stretcher draped with sterile sheets, after 20-30 minutes of immersion, removal of dressings and debridement of crusts.

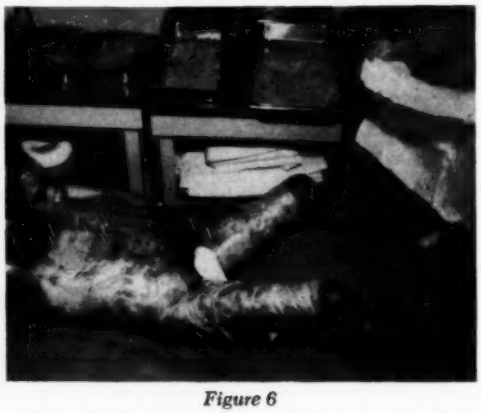

Figure 6

Dressing the wound is facilitated by the availability of prepared separately canistered rayon squares impregnated with Furacin and cut into various shapes and sizes.

ly accomplished by complete grafting, that is, the application of large split thickness skin grafts. The area to be grafted is carefully shaved about its margins and cleansed with Septisol. Exuberant granulation tissue, which is potential scar tissue, is carefully excised to its base with a sharp knife and the resultant bleeding controlled by the application of manual pressure on epinephrin-saline packs. One ml. of 1:1000 epinephrin in 250 ml. of saline has an excellent hemostatic action with but very few side effects.

When split thickness grafts are applied to a raw surface, they are supported by a coagulum of tissue fluid at the interface until the ingrowth of capillaries on about the third day. During this period of incubation at body temperature, the viability of the grafted cells rapidly declines until revascularization occurs. Thus, the "take" of a graft can be jeopardized by any factor which interferes with the normal interface of tissue fluid coagulum or the revascularization by tiny buds of ingrowing capillaries. Therefore, the most important threats to the survival of a graft are three: infection, hematoma, and shearing motion. Infection destroys the normal interface coagulum by lysis. Hematoma separates the graft from its nourishing bed. Shearing movement of the graft over its bed interrupts the continuity of the revascularizing capillary buds. Measures taken to combat infection consist of prophylactic systemic antibiotics, adequate debridement, (including the preoperative removal of all crusts and the shaving of adjacent surfaces), and the irrigation of the graft-bed-interface with streptomycin-penicillin-saline solution at the completion of the grafting procedure. Hematoma formation can be prevented by careful hemostasis including, in addition to the usual measures, the electrocauterization of all minute bleeding points and the introduction of small perforations (pie-crusting) for drainage. Shearing movement of the graft may be minimized by the placement of multiple basting sutures across the entire surface of the graft, by circumferential sutures tied over a stent, and by splinting of the involved anatomical area. Upon completion of the operative procedure, the surgical dressing applied consists of a single layer of fine-mesh rayon placed directly over the graft, covered by coarse gauze soaked in antibiotic solution, and held firmly in place by a light pressure dressing or by the stent dressing mentioned above, depending upon the contour of the area. In the immediate postoperative period, the patient is given erythromycin, novobiocin, or penicillin, parentally, if necessary, because of the effectiveness of these drugs against staphylococcal and streptococcal bacteria. The donor site is initially dressed with fine mesh Furacin-impregnated rayon covered by an absorbent dressing which is replaced on the third postoperative day.[14] By this time it has usually become saturated with serosanguineous discharge and if unchanged would provide an excellent medium for bacterial multiplication, especially in a warm, humid climate. After the graft is primarily healed, the application of a very thin layer of vaseline, or lanolin, to both split graft and donor site helps prevent drying, cracking, and fissuring.

Incomplete grafting with "stamp" grafts has its special indications but is justifiably carried out much less frequently than complete grafting. In this technique a backing of fine mesh gauze, impregnated with vaseline or Furacin for its adhesive effect, is placed on the epithelial surface of a split graft to prevent its rolling upon itself. The Dermatape of the Reese Dermatome also serves admirably for this purpose. The graft so prepared is cut into squares 1 to 4 cm. in area.[2] Grafts of this type are indicated in irregular areas of skin loss where they can be inserted among the existing islands or peninsulas of viable epithelium. In infected areas, these grafts are more prone to survive because of excellent drainage, the loss of one graft in no way compromising the survival of another. They also fit well into areas of irregular contour. In addition, stamp grafts are indicated in extensive burns with limited donor sites, or in poor-risk patients where they can serve as centers of epithelial proliferation. They are especially adaptable to areas of uncontrollable motion, such as the chest wall where they move in harmony with the underlying tissues, thus avoiding any shearing effect on the ingrowing capillaries. The defects between stamp grafts are bridged by thin scar epithelium which is prone to contracture and

the general appearance of these grafts is unsightly. For these reasons, their use is contraindicated on the hands, face and about joints. Because they do not leave deeply scarred pits in the donor site, however, these grafts have largely replaced pinch grafts. The initial dressing of stamp grafts is unusual. They are left exposed to the air but protected by a cage of sponge rubber walls with a wire top ("bird-cage" dressing). On the fifth or sxith day the patient is placed in a tank and the usual dressing ritual for burns resumed until epithelialization is complete.

In very severe burns the area of skin loss is frequently so great that the patient is able to withstand little if any further trauma, as in the taking of extensive split thickness grafts. In such cases homografts, taken from a living or recently deceased donor under aseptic conditions, serve as an invaluable but temporary physiological dressing. They have unquestioned ability to stimulate epithelial proliferation wherever they are placed. At the time of the homografting it is wise also to apply some autogenous grafts in order that there may be a permanent increase in epithelial coverage when the homograft dissolves within 4 to 6 weeks. Homografts of skin are, unfortunately, of very limited availability.

In the sequence of grafting, top priority must be accorded burns of the eyelids, hands, and joints. Certain anatomical structures take precedence over others in the sequence of grafting, in direct relation, of course, to the disability resulting from delay. Burns of the eyelids frequently produce a severe ectropion which may result in corneal ulcer and blindness. For this reason early operation is indicated with the application of a split thickness graft to the upper lid and a full thickness graft to the lower. In severe burns of the hands where effective mobilization of the digits is either impossible or extremely painful, splinting of the hand in the position of function is advised. This is done in addition to dressing the fingers individually and keeping the extremities elevated. In these cases by the use of a Universal or similar splint, the tips of the fingers are kept close to the tip of the thumb. With the hand in this position, even a small range of motion is effective in making the hand useful and will, therefore, encourage further use. Should the hand become completely immobilized in this position, it is still much more useful than if in extension. The hand is an area wherein early aggressive surgery is mandatory in order to eliminate the periods of edema and ulceration which can lead to serious and permanent loss of function. By operating without a tourniquet the depth of the skin necrosis can be frequently judged by lack of bleeding and the color of the tissues and by preoperative cutaneous anesthesia. In areas of movement, such as the neck and joint surfaces, the regions of skin loss are covered as soon as possible in order to avoid a limitation of motion from contractures and adhesions of raw granulating surfaces.

Summary

1. The current concepts of the understanding and handling of the thermal burn problem have been briefly reviewed.
2. Three phases of burn treatment are outlined, acute, intermediate, and definitive. Each phase is discussed in terms of specific details of therapy.
3. A concept of surgical care of the burned area is presented with specific consideration accorded the use of a water-bath tank to aid in the elimination of infection, and facilitate early grafting.

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THE INCIDENCE OF GALL STONES

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The incidence of gall stones has been of considerable interest to many medical men over a long period of time. In many instances this interest has led writers to review large numbers of autopsies in order to seek out the relative incidence of gall stones, not only in males and females, but also in the white and Negro races. The wealth of statistical data also includes the incidence in the various age groups. It is interesting that the various data reviewed revealed very striking similarities as regards the incidence of gall stones.

This is a study of 6,107 autopsies performed at the Medical College of South Carolina and the Roper Hospital over the years 1913 to 1948. It was initiated not only to determine whether the incidence of gall stones in our series paralleled that of other authors, but also to see whether there had been any increase in the incidence in recent years. It occurred to the junior author that, with an improvement in economic conditions and particularly with improvements in diet, there might be a corresponding increase in the incidence of gall stones. It was further felt that, if this were true, the increased incidence should be more apparent in the Negro race, since they had probably made proportionately greater strides in recent years in enhancing their diet. Ehrmann,[3] states that the incidence of gall stones in Germany rose after World War I "under improved conditions of nutrition."

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The cases studied by autopsy in the years 1913 through 1939 totaled 3,546. These cases were divided into groups according to the age, sex and race, and the incidence of gall stones was determined for each group. The same procedure was carried out on those cases studied by autopsy in the years 1940 through 1948. These totaled 2,561. The incidence in these two periods (1913-1939, 1940-1948) was then compared. The cases in the age groups from 0 to 29 years were deleted from this report because of the disproportionately large group of Negro children examined in an age group in which gall stones are uncommon.

The findings based on this method of study are presented in Table I. In the period 1940-1948, the incidences of the 30 to 100 year old groups were somewhat higher than in the period 1913-1939. It is not clear whether this represents a significant rise in the incidence of gall stones. The slightly higher figures during the 1940-1948 period may be solely on the basis of a general increase in the life span of the population. In any event, the relative pro-

TABLE I
GALL STONE INCIDENCE IN 30 TO 100 YEAR OLD PEOPLE

	Negro Male	Negro Female	White Male	White Female
1913 - 1948				
Autopsies	1677	942	580	258
Gall Stones	20	39	23	33
Incidence %	1.19%	4.14%	3.96%	12.7%
1913 - 1939				
Autopsies	1132	596	269	108
Gall Stones	13	19	9	12
Incidence %	1.14%	3.18%	3.34%	11.1%
1940 - 1948				
Autopsies	545	346	311	150
Gall Stones	7	20	14	21
Incidence %	1.28%	5.78%	4.5%	14%

portions remain. Ludlow,[6] in a study of 4,800 autopsies found a proportionately similar incidence of gall stones.

From our series of cases it can be seen that the white race is approximately three times more susceptible to gall stones than the Negro race. Cunningham and Hardenbergh[2] report a four to one difference. Equally as striking is the consistent sex difference, with females having a significantly higher incidence than males and with white females having the highest incidence. Block,[1] Jaffe,[5] and Lopis[7] in their series of cases also note this sex incidence.

Tables II, III, and IV show the incidence of gall stones rising with age. It should be emphasized that gall stones are found predominately in adults. The youngest person found to have gall stones in this series was a 17 year old colored female. This was the only case less than 20 years of age. Only eight cases were found in the 20 to 29 year old group. Ludlow[6] found only two cases under 20 years old in his study of 4,800 autopsies. Heringman and Aiken[4] reported six cases of gall stones in persons 16 to 20 years old and stressed that the condition is unimportant in the young.

Summary. The incidence of gall stones in 6,107 patients examined by autopsy at the

TABLE II
GALL STONE INCIDENCE IN VARIOUS AGE GROUPS
1913-1948

	AUTOPSIES				STONES				INCIDENCE %			
	NEGRO		WHITE		NEGRO		WHITE		NEGRO		WHITE	
Year	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
30-39	524	317	106	54	4	6	0	1	.76	1.8	0	1.8
40-49	463	258	148	49	4	8	3	5	.86	3.2	2.02	10.2
50-59	322	176	125	52	1	13	8	10	.31	7.3	6.4	19.2
60-69	260	142	117	61	7	9	4	6	2.6	6.3	3.4	9.8
70-79	93	43	66	34	3	2	8	9	3.2	4.6	12.1	26.
80-89	13	15	17	8	0	1	0	2	0.	6.6	0.	25.
90-100	2	1	1	0	1	0	0	0	50.	0.	0.	0.
Totals	1677	942	580	258	20	39	23	33	1.19	4.14	3.96	12.7

TABLE III
GALL STONE INCIDENCE IN VARIOUS AGE GROUPS
1913 - 1939

	AUTOPSIES				STONES				INCIDENCE %			
	NEGRO		WHITE		NEGRO		WHITE		NEGRO		WHITE	
Year	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
30-39	345	227	47	28	3	4	0	1	.86	1.7	0.	3.57
40-49	350	158	72	25	4	4	0	1	1.14	2.5	0.	4.0
50-59	214	100	62	22	1	4	3	5	.46	4.0	4.8	22.7
60-69	166	85	51	19	3	5	2	3	1.8	5.8	3.9	15.7
70-79	54	21	23	12	2	1	4	1	3.7	4.7	14.2	8.3
80-89	2	5	8	2	0	1	0	1	0.	20.0	0.	50.0
90-100	1	0	1	0	0	0	0	0	0.	0.	0.	0.
Totals	1132	596	269	108	13	19	9	12	1.14	3.18	3.34	11.1

TABLE IV
GALL STONE INCIDENCE IN VARIOUS AGE GROUPS
1940 - 1948

	AUTOPSIES				STONES				INCIDENCE %			
	NEGRO		WHITE		NEGRO		WHITE		NEGRO		WHITE	
Year	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
30-39	179	90	59	26	1	2	0	0	.5	2.2	0.	0.
40-49	113	90	76	24	0	4	3	4	0.	4.4	3.9	16.6
50-59	108	76	63	30	0	9	5	5	0.	11.8	7.9	16.6
60-69	94	57	66	42	4	4	2	3	4.2	7.0	3.0	7.1
70-79	39	22	38	22	1	1	4	8	2.5	4.5	10.5	36.3
80-89	11	10	9	6	0	0	0	1	0.	0.	0.	16.6
90-100	1	1	0	0	1	0	0	0	100.	0.	0.	0.
Totals	545	346	311	150	7	20	14	21	1.28	5.78	4.5	14.0

Medical College of South Carolina and the Roper Hospital during the years 1913 through 1948, has been determined on the basis of sex, color and age. These cases were subdivided into two groups, that is, those autopsies from 1913 through 1939, and 1940 through 1948 in order to ascertain whether an improved diet has any effect on the incidence of gall stones.

Conclusion. All findings, in these cases, paralleled in all respects the findings of other authors. That the incidence of gall stones increases with advancing age and is greatest in the white female is conclusively demonstrated. Emphasis is placed on the infrequency of gall stones in children. Whether the small increase in incidence of gall stones during the period 1940-1948 over that 1913-1939 is significant cannot be determined.

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MEDICAL COLLEGE CLINICS

THE MEDICAL COLLEGE OF SOUTH CAROLINA

ELECTROCARDIOGRAM OF THE MONTH

The Stress Electrocardiogram

DALE GROOM, M. D.
Department of Medicine

Case Record—A 50 year old lady with symptoms of the menopause acknowledged having had recurrent pain in the mid-chest, usually associated with exertion, for about one year. In recent weeks the pain had awakened her occasionally at night with a consciousness of cardiac irregularity. The recurrences had become progressively more frequent, culminating in an attack of severe substernal pain for which she was admitted to the hospital.

Examinations including several electrocardiograms and serum transaminase determinations failed to show evidence of myocardial infarction. Her pulse was noted by a nurse to become markedly irregular during an episode of pain.

A diagnosis of angina pectoris with probable impending infarction was made on the basis of the patient's history and the tracings illustrated here, recorded before and immediately after mild physical exercise. Pain induced by the exertion was promptly relieved by nitroglycerin, concurrent with a regression of the electrocardiographic abnormalities.

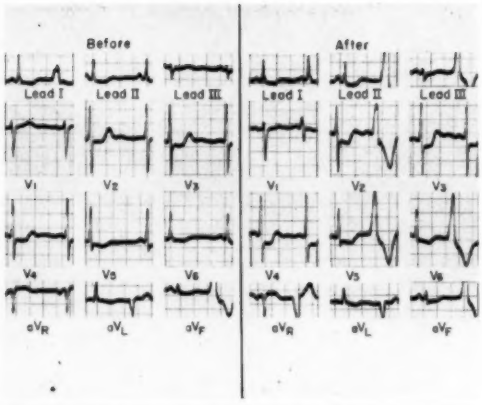
The patient was treated with quinidine and Dicumarol (bishydroxycoumarin). Interestingly, both the angina and the extrasystoles cleared, and for two months she resumed work and remained virtually free of these symptoms on anticoagulant therapy alone. The Dicumarol was then discontinued, her angina recurred, and a few days later she died suddenly following an emergency readmission to the hospital.

At autopsy the heart showed advanced atherosclerosis throughout the entire coronary arterial tree. The right coronary artery appeared to be completely occluded and areas of fresh infarction were found in the left ventricle and the interventricular septum. An old scar was present near the apex.

Electrocardiogram—The resting tracing on the left is similar to one recorded several days previously. Although T waves are diphasic or inverted and the S-T segments depressed about 1 mm. in some precordial leads it contributes little to the diagnosis. Several ectopic beats arise from a single ventricular focus.

After exercise the heart rate is accelerated from 72 to 90, the same ectopic beats become more numerous, and the S-T segments of normally conducted beats are depressed as much as 3 mm. in the precordial leads. Remarkably little alteration takes place in the T waves.

Discussion—Now and then we need to remind ourselves that the electrocardiogram is essentially a retrospective test of coronary circulation that shows what has happened rather than what will happen to the myocardium. It depicts the end results of coronary sclerosis. An exception to this is what might be called the "stress electrocardiogram" which attempts to record transitory electrical abnormalities produced by



subjecting the heart to some sort of physical or chemical stress. Only when the reserve of the coronary circulation is depleted to the point that ischemia is imminent, however, can an additional work load on the heart be expected to produce significant changes in the tracing. It is because these changes may be elicited before the actual infarction and sometimes before any clear-cut symptoms or signs of coronary disease that a stress electrocardiogram is often of greater diagnostic value than the ECG recorded at rest.

Two general types of stress are currently utilized for this purpose. The first is that of lowering the oxygen saturation of arterial blood by having the patient breathe a mixture containing only 10% oxygen and is known as the anoxemia test. Electrical abnormalities or pain or both may thereby be provoked from an area of myocardium having an already marginal blood supply. Although the anoxemia entails considerable risk the test has the advantage of affording a stress which is readily measurable and can be standardized for all patients.

The other approach is that of increasing the work load of the heart by various types of physical exertion such as exercising on a treadmill or bicycle apparatus, calisthenics, climbing steps, or simply walking. These procedures have the obvious advantage of involving activities familiar to the patient. On the other hand, exercise tests are undoubtedly less amenable to standardization: while a given amount of work may be measured quite accurately, the effort which they require may be appreciably greater for an individual accustomed to a sedentary life than for one whose muscles and physiology are conditioned by years of strenuous physical activity. The variability in individual response to exercise is perhaps minimized in the popular "Master 2-step" test which takes into account the age, sex and weight of the patient in prescribing the number of trips he is to make up and down a pyramid of two nine inch steps in a given period of time. A repeat electrocardiogram is then recorded, preferably within one minute after completion of the exercise with the electrodes in place, to compare with the resting tracing made previously.

The generally accepted criterion of a positive test is displacement of S-T segments in one or more leads. How much displacement is a matter of some debate, but since depressions of up to 1 mm. are not uncommon in normal subjects, one should not place too much reliance on minimal shifts of the baseline. Usually the most revealing changes are seen in the precordial leads where an S-T shift of 1 mm. or more is construed as a positive test, indicative of coronary insufficiency. If, as often occurs, the patient's pain is precipitated by the stress, and especially if the pain and the ECG abnormalities promptly subside on administration of nitroglycerin, the diagnosis is rendered even more certain.

Ischemia of subendocardial layers of myocardium is thought to cause the current of injury responsible for depression of S-T segments. These layers are located at the most distal part of the coronary circulation, so that partial occlusion anywhere along the course of an artery might logically be manifested there more than proximally. Hence the usual downward S-T displacement, because normal muscle tissue intervenes between the ischemic area and the precordial electrode.

Other types of changes are frequently seen in the electrocardiogram following stress. An occasional patient may have a bundle branch block only on exertion, denoting impairment of blood supply in the region of the ventricular conduction system. Another response is illustrated in this patient's case by the increase in ventricular ectopic beats from a single focus—probably the site of ischemia (which configuration of the complexes would suggest is in or near the septum.) Certainly either response is indicative of a decreased coronary reserve, irrespective of the usual criteria of a positive test. T wave changes are often prominent after exercise but are presently regarded as of lesser significance.

Several precautions pertaining to these tests should be emphasized. Their purpose is not to induce pain, nor is a positive result necessarily dependent upon reproduction of the patient's symptoms. If angina or undue dyspnea or fatigue does occur the stress should be discontinued immediately and the tracing recorded at that stage. And of course the tests are contraindicated and unjustified in patients whose electrocardiograms at rest are already diagnostic of coronary disease.

Significant abnormalities in the ECG are transitory, often lasting no more than a minute or two, so there should be as little delay as possible between the termination of exercise and the recording of the tracing. Doubtless if this practice were adhered to, and the precordial leads (particularly V_4 or V_5) recorded first rather than last, there would be fewer false negative results. With the best technique, however, present exercise tests frequently fail to reveal even advanced coronary artery disease. The incidence of false posi-

tive results depends of course upon one's criteria, but they undoubtedly do occur. As yet the stress electrocardiogram falls far short of the niceties of quantitative measurement by which we evaluate pulmonary or renal function, but it is useful in providing objective evidence of impairment of coronary circulation before the ultimate infarction.

The relief which some patients with angina receive from anticoagulant therapy is now well known but little understood. Regardless, if the therapy is discontinued for reasons other than bleeding, withdrawal should be gradual rather than abrupt as judged by the more than ordinary incidence of thromboses immediately thereafter. Improved measures of control of anticoagulant therapy will doubtless bring wider acceptance of its long-term use in patients with known coronary heart disease.

Incompetent Internal Cervical Os

A Case Report

EDWARD J. DENNIS, M. D.
Department of Obstetrics and Gynecology

A 30 year woman who had had 4 pregnancies and 4 abortions was first seen on April 25, 1957. She was referred for evaluation since four pregnancies over a period of eight years had all resulted in abortion at approximately 18-22 weeks gestation.

Past history was entirely negative except that related to her pregnancies.

Her menarche occurred at the age of 13. Menses occur every 28 days lasting for 4 to 5 days, and her last normal menstrual period began on April 8, 1957. She denied any symptoms referrable to her genitourinary system.

She was an obese colored female weighing 223 pounds. The remainder of the pertinent findings are limited to the pelvic examination.

Pelvic examination showed Bartholin's and Skenes glands and the urethra to be negative. The vagina contained a moderate amount of foamy white discharge and smears were positive for Trichomonas vaginalis. The cervix was within normal limits and the uterus anterior in position, normal in size and configuration. No adnexal masses were detected.

Routine laboratory studies were all normal.

A test for determining incompetency of the os with a cervical dilator was inconclusive.

Hysterograms using a balloon attached to the end of a standard type endocervical cannula and filled with Lipiodal showed what appeared to be a widened cervical canal. (Fig. I).

The problems involved were discussed with the patient and her husband, and she was asked to go ahead and become pregnant. It was also requested that she call me after her first missed menstrual period.

She was next seen in April, 1958, and at that time stated that her last menstrual period occurred on

March 7, 1958, giving her an estimated confinement date of December 13, 1958. Pelvic examination was inconclusive in establishing pregnancy so she was advised to return in May, 1958.

At the time of her visit in May, examination confirmed the presence of an intrauterine pregnancy.

It was decided to follow her at weekly intervals in order to detect any change of effacement and dilatation in the cervix.

On June 16, 1958, there had occurred approximately 80% effacement but no dilatation of the cervix. It was decided that since she was now approximately 14 weeks pregnant and approaching the stage of pregnancy in which all of her abortions occurred, that repair should be done. The decision was also obviously influenced by the changes in the cervix.

The Shirodkar procedure for closure of the incompetent internal cervical os was done on the 18th of June, 1958. There were no significant technical difficulties except for a moderately severe blood loss.

Her postoperative course was uncomplicated and she was discharged from the hospital on the eighth postoperative day.

At the time of her visit in July, fetal activity was present and fetal heart tones were heard for the first time. This, incidentally was the first time that a pregnancy had progressed to this stage.

On August 1, 1958, she was admitted to the hospital because of vaginal bleeding but had no uterine contractions or leakage of amniotic fluid. Vaginal examination showed the site of bleeding to be the left lateral side of the cervix where the Dacron used in the repair had eroded through the overlying vaginal mucosa. The bleeding stopped and she was discharged after 24 hours in the hospital.

She was next seen one week later with rupture of the membranes and temperature of 100.8° F. Examination confirmed the presence of ruptured membranes and endometritis. It was felt that the sequence of events was first, cellulitis of the area adjacent to the site of erosion of the plastic material through the

mucosa, and then spread to the amnion and production of amniotitis. This obviously led to rupture of the membranes.

Eight hours after admission, the ligature around the cervix was cut allowing the cervix to dilate sufficiently for the delivery of a one pound two ounce immature infant.

It was felt that repair of the cervix at this particular time was contraindicated due to the presence of local infection as well as endometritis.

Her postpartum course was uncomplicated and she was discharged from the hospital on the fifth postpartum day.

DISCUSSION: Attention to this syndrome was first presented in this country by Lash.[1] His approach consisted of the establishment of the diagnosis either clinically by passing a sound or dilator into the uterine cervix in order to demonstrate the defect, or, the use of hysterograms as a radiological demonstration of incompetency. Repair of the cervix was then performed before the patient became pregnant.

An obvious revival of interest in the syndrome of incompetent internal cervical os has been demonstrated in the last several months. This seems to be due primarily to an article published by Barter, Riva, and Parks[2] in which 22 cases were reported.

Shirodkar,[1] of India, recognized the same clinical features and findings, however, he recommended correction of the defect during the second trimester of pregnancy. This is the approach now utilized by Barter and others.

The clinical symptoms are those of repeated mid trimester abortion. A sudden escape of amniotic fluid between the sixteenth and twenty-eighth week of pregnancy and the absence of painful uterine contractions preceding the rupture are the most striking features in the history of such pregnancies.

The etiological factor advocated by most is that of trauma at the time of previous delivery or curettage of the uterus. Others feel that in certain cases, a congenital origin of incompetency is tenable and logical.

Establishment of the diagnosis seems to be more accurate if one simply follows the patient at weekly intervals during early pregnancy in order to determine progressive effacement and dilatation resulting in protrusion of the membranes through the dilating cervix.

As soon as the diagnosis is established, repair should be carried out. This should be done preferably before any significant degree of dilation has occurred since amniotitis is an uncommon but significant complication of the procedure.

The technique of the procedure is not too difficult but requires adequate exposure and a thorough knowledge of what is to be accomplished. After an incision of the vaginal mucosa anteriorly and posteriorly on the cervix, an aneurysm needle is used to pass the material used for ligation of the incompetent os around the cervix. This suture is then tied anterior to the cervix and fixed with interrupted sutures of black silk. It is similarly anchored posteriorly with the same type sutures.

The selection of a proper suture material for the surgery has been difficult, however, the preferrable one at this time appears to be Marselene (Ethicon). This is a fine mesh Dacron developed for use in preparation of synthetic arterial prostheses. Fascia grafts utilizing fascia lata from the thigh of the patient have also been used.

Results in the series reported by Barter are encouraging. Before surgery, infant survival in 91 previous pregnancies in this group was 11 per cent, and, following operation, approaches 75 per cent.

Summary

1. A case of incompetent internal cervical os is presented with treatment and result.

2. In a patient with repeated mid-trimester abortions, incompetent internal cervical os should be considered.

3. Extreme care and reservation must be made in establishing the diagnosis and delaying the surgical correction until the danger of first trimester abortion is passed.

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PRESIDENT'S PAGE

A physician should seek consultation upon request, in doubtful or difficult cases, or whenever it appears that the quality of medical service may be enhanced thereby.

The first thought of importance in a consultation is that it is entirely for the benefit of the patient. Especially is this true in cases of serious illness involving doubtful or difficult conditions. Many times patients deem it necessary and want to have another physician's opinion. The attending physician may disagree, but it is his duty to acquiesce and comply with his patient's request with promptness.

Consultants should always be punctual and, accompanied by the patient's physician, should proceed with their examination. When the examination is complete, the consultant and the attending physician should retire to discuss the case and any treatment deemed necessary. Following this a free and frank discussion of the case should be held with the patient or responsible relatives, the attending physician and the consultant both in attendance.

Observance of the above rules will keep the relationship between the patient and his physician on the highest possible plane and improve the quality of medical care, and many helpful diagnostic and therapeutic hints may be discussed between the physicians.

The first conference on the problem of the aging was held in Chicago last September, at the invitation of the A. M. A., between chairmen of the state committees on aging. Much valuable information was exchanged at this meeting that will be helpful to organized medicine in planning a program of hospital and medical care for the oldsters. One main problem is to keep socialized trends completely foreign to any plan for the care of the aged. Physicians, industry, hospitals, insurance organizations, and the general population will all have to cooperate in formulating a workable plan. I am sure that our state committee, whose chairman was in attendance at the Chicago meeting, will give the house of delegates much valuable information on this urgent matter at our state meeting in May.

While attending the Southern Medical Association Convention in New Orleans the first part of November, I had the pleasure of meeting with the National Alumni Association of the Medical College of South Carolina. Among those present were Dr. Kenneth Lynch, President of the Medical College, as well as other members of the faculty. Dr. Jack Norris of Atlanta, with his usual flair for entertainment, was Master of Ceremonies. The dinner was well attended. Before dinner Dr. Janie Topp of Louisiana entertained at a delightful cocktail party at the Jung Hotel in honor of the National Alumni Association.

I would like to take this opportunity to wish every member of the state association a very happy and most prosperous New Year.

R. L. Crawford, M. D.
President

Editorials

THE O'DRISCOLL STORIES

Over the many years during which Dr. Cyril O'Driscoll taught at the Medical College of South Carolina, he achieved a legendary status for his many students and the members of the faculty. Not only is Dr. O'Driscoll a most colorful character himself, but he has acquired over the years a great fund of unusual stories which are themselves quite colorful. There is a wonderful opportunity now for the compilation of a volume which would cover both the life and the laughs of Dr. O'Driscoll, and now is the time to start a collection of material for a final production which would be in the way of a testimonial to him. Many former associates will have had the experience noted in this quotation: "For a time after I came to Charleston I kept track of some of the wonderful stories that were told about him and some wonderful stories which he himself told. He is getting a little milder now, and at some seventy-three or seventy-four years old, has calmed down nearly to the point where most men are at forty."

It is now the purpose and desire of a group of friends of Dr. O'Driscoll to obtain from as many as possible of his former pupils any recollections, anecdotes, stories, or other material which would form the basis of a memorial volume. Dr. Melvin H. Knisely of the Department of Anatomy of the Medical College has undertaken to be the recipient of any articles which may be sent in. So far there are no concrete plans for the way in which the compilation will be handled, but the Committee is very anxious that all who recall experiences and conversations with Dr. O'Driscoll send in as much material as possible, so that the various accounts can be correlated and edited to eliminate overlapping.

DIET FOR THE PREGNANT

A volume of information over the recent years has built up a more solid knowledge of the diet which the pregnant woman should consume for the purpose of production of healthy infants and avoidance of anomalies. There are many articles on the subject and a rather large number of brief condensations into terms which are intended to be intelligible to the average woman, but often are perhaps too ambitious for the purpose. There is now available a small but well condensed pamphlet with the title "Food for the Expectant Mother and Her Baby". It is intended for people above the lower levels of intelligence, and is written with authority by Julia Porcher Brunson, who has long been nutritional consultant to the South Carolina State Board of Health. Copies of this pamphlet may be obtained without charge from the State Board of Health for distribution through offices and clinics.

DOCTOR STOKES COLLEGE

A recent newspaper article credits Dr. J. Howard Stokes of Florence with being the ring-leader in a movement to establish in Florence an off-campus center of the State University, where it is possible for students of the area to attend classes which are equivalent to those given at the University in Columbia. Dr. Stokes inaugurated this plan by urging the Kiwanis Club to undertake arrangements for obtaining such a facility. It is expected that this activity will gradually expand to much larger size. Dr. Stokes heads the Florence County Higher Education Commission, a liaison body created by the Delegation to work with the University.

MANAGEMENT OF SYPHILIS

Although tremendous gains have been made in recent years in the control of syphilis, the disease still remains very important for all practitioners. Literature on the subject of management of syphilis is very extensive, and changing techniques in treatment have kept it in a state of near obsolescence. To fill a need for a brief summary of the subject of management of syphilis, a short pamphlet has been written by Dr. Evan W. Thomas, a well recognized authority on the subject. This booklet

can be obtained without charge from the office of Dr. R. W. Ball of the State Board of Health, and it is suggested as a valuable handbook for those who are concerned with the management of the disease.

TOGETHERNESS AND WELLNESS

For some reason probably related to an underlying personal cantankerous disposition, we have never been able to assimilate with any pleasure the popular so-called word "togetherness" which now is enjoying a fashionable vogue in matters of advertising and otherwise. We have just read in the *Worcester Medical Journal* a short comment on this somewhat nauseating term in which the author proposed to use the word "separateness" as an antidote to the term "togetherness", characterizing the latter "word" as being of doubtfully legitimate origin. He ends with the short comment—"Two clams, moist and soft within one closed clam shell,—that is 'togetherness'." We were reminded of the suggestion of the clams when we were confronted with an announcement in one of our local newspapers that a Mental Health Counselor was to present a talk entitled "Increasing Mental Wellness". So far we have been unable to find any origin for the term "wellness" in our dictionary, and it smacks so much of the same family from which "togetherness" comes, that we are inclined to wonder whether we are now facing an outbreak of these various "nesses", spread rapidly over the country through the eager media of advertising.

The privilege of coining words belongs to anyone, but it should be restricted to the coinage of good words which in some way have some refinement of meaning which was lacking in the older, tried and true variety. We trust that our vigilance will prevent an infiltration of these ominously undesirable newcomers into the pages of this *Journal*.

ON BOOK REVIEWS

as seen by The Editor, Who Depends Gratefully on the Kindness of his Friends for these Labors of Love.

The purpose of the book review is to inform the readers of the Journal as to the quality and desirability of such medical publications as are submitted for review. The review is written preferably by someone who is recognized as able and perceptive in the field in which the book is included.

From this editor's standpoint the following attributes add greatly to the value of a review:

1. Prompt reporting, so that the review has news value. Sometimes, however, because of varying demands for space in the Journal, reviews may not appear for some little time after they are received—hence early receipt is even more desirable.

2. Brevity of statement as comprised in about 150 words. Our space for reviews is limited by the amount of other current material.

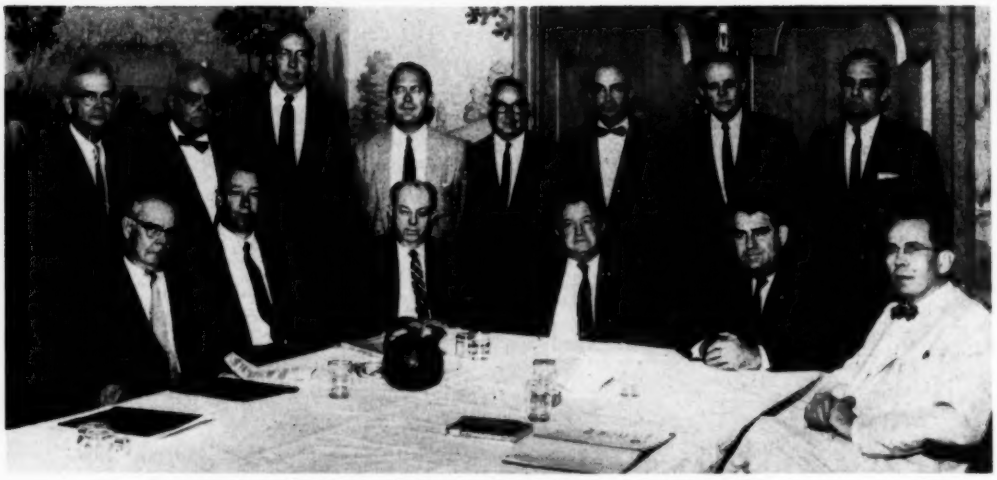
3. Evaluation of the book and comparison with similar books, rather than a resume of the contents, or any long exposition of the theme.

4. Frank opinion of the soundness of the book; praise or disparagement as indicated.

It is not essential that a book be read in its entirety in order that the reviewer gather an opinion.

Direction of attention to minor typographical errors is not important, unless the error is important. Some note of format, illustrations, etc. may be desirable, but not essential.

FORM FOR REVIEW: Double space, with carbon copy. Title in this form: *ALICE IN WONDERLAND,* by Lewis Carroll. 3rd Edition. Aldus Elzevier Co., Philadelphia. 1957. Pp. 357. Price $5.00.



Council of the South Carolina Medical Association, 1958-1959.
Seated—Scurry, D. L. Smith, Crawford, Weston, Cain, Robt. Wilson.
Standing—Burnside, Wyatt, G. D. Johnson, B. S. Smith, Waring, Bozard, Brewer, M. L. Meadors.
Absent—Gressette, Fleming.

Photo By E. S. Powell

MINUTES OF COUNCIL MEETING COLUMBIA, S. C., NOVEMBER 19, 1958

A special meeting of Council was held at the Columbia Hotel on November 19, 1958. The meeting was called to order at 3 p. m. by the Chairman, Dr. J. P. Cain. Members present were Drs. Crawford, Weston, Wilson, Stokes, Waring, B. Smith, Burnside, Scurry, Wyatt, Bozard, Brewer, D. Smith, G. D. Johnson and Mr. M. L. Meadors. During a portion of the meeting Drs. Frank Owens, George Wilkinson, James Galloway, and Harold Jervey were also present.

The minutes of the meetings of May 1958 were read and approved as published.

In regard to the matter of the Duke Endowment furnishing nursing consultants to various hospitals on request, which had been discussed at the meeting of Council on May 13, 1958 and had been referred to the House of Delegates, Mr. M. L. Meadors read the resolution adopted by the Board of Trustees of the South Carolina Hospital Association in January 1958 as follows:

Whereas, There is a real need in South Carolina to improve the care to patients in our hospitals; and

Whereas, this care can be improved by strengthening the preparation of employed nurses through in-service development programs; and

Whereas, This care can also be further improved by extending assistance to the instructors in our schools of nursing to provide stronger programs in nursing education; and

Whereas, administrative hospital and nursing personnel frequently feel the need to seek help in meeting their problems related to patient care; and

Whereas, a consultant whose full-time responsibility would be to work with hospitals at their request would be of great assistance in helping to meet these needs; now therefore be it

Resolved, that the South Carolina Hospital Association hereby requests The Duke Endowment to employ a full-time, qualified nurse consultant to be made available to hospitals, to schools of nursing, and to certain allied health organizations upon request to assist with such nursing service and education progress and projects as may be deemed appropriate to The Duke Endowment.

A motion to approve a similar resolution was adopted, Drs. Burnside and Wilson dissenting.

Dr. George Wilkinson reported on activities of the State Board of Medical Examiners, following which Dr. William Weston, Jr. raised the question of the advisability of excluding graduates of foreign medical schools from serving as residents in hospitals in South Carolina. This was discussed in detail by Dr. Wilkinson, regarding the policies of the Board in this matter, following which Council adopted a resolution reiterating its confidence in the Board of Medical Examiners in the exercise of their discretionary judgment in these matters.

Dr. Harold Jervey, Secretary of the Board of Medical Examiners, then spoke regarding the proposal requiring annual or bi-annual registration of physicians for continuation of licensure. Council expressed its general approval, but it was moved and passed that the matter be brought to the attention of the House of Delegates in May 1959.

Dr. James Galloway then spoke of the activities of the Committee on Certification of Psychologists and it was moved and carried that Council endorse the recommendations of this committee, to the effect that such certification adheres strictly to the fundamental principle that the diagnosis and treatment of nervous and mental illnesses, like other illnesses, remain a medical responsibility. This motion was passed, and it was further moved and carried that the course of action be referred to the Committee on Legislation and the Committee on Certification of Psychologists as well as to the Counsel of the Association.

The following budget was adopted for the calendar year 1959.

Secretary		
Office help	$ 900.00	
Office expense	600.00	
Travel	500.00	
Total		$ 2,000.00
Treasurer	$ 100.00	$ 100.00
Journal		
Office expense	$ 1,500.00	
Editor's Salary	1,800.00	
Adv. Mgr. Salary	1,200.00	
Printing	20,000.00	
Total		$24,500.00
Executive Secretary		
Salary	$10,000.00	
Office help	7,500.00	
Travel	1,500.00	
Rent	1,200.00	
News Letter	800.00	
Office Supplies	1,500.00	
Tel. & Tel.	1,500.00	
Utilities	100.00	
Conf. and P. R.	750.00	
Insurance	600.00	
Total		$25,450.00
Delegates to A.M.A.		
Travel	$ 1,800.00	$ 1,800.00
President's Expense	$ 1,200.00	$ 1,200.00
General Expenses		
Woman's Auxiliary	$ 650.00	
President's Gift	200.00	
Historical Committee	500.00	
Infant & Child Health	200.00	
Maternal Welfare	200.00	
Contingent Fund	1,000.00	
Civilian Defense	500.00	
Auxiliary Bulletin	1,000.00	
Medico-Legal	1,000.00	
Directories	1,000.00	
Publicity	300.00	
Total		$ 6,550.00
Total Budget		$61,600.00

Dr. Frank Owens and Mr. M. L. Meadors spoke of the possibility of legislation being introduced into the coming session of the General Assembly particularly in regard to the practice of Optometry and to the practice of Naturopathy, and Dr. Owens reported on the present status of the "Doctor Draft" situation. Dr. J. A. Stokes reported on the possible introduction of a bill in the Legislature regarding the practice of Optometry, after which Dr. Wyatt moved that counsel continue the support of the South Carolina Medical Association against its passage. Dr. William Weston, Jr. requested to be recorded as opposed to this policy.

Dr. Waring noted that for the past two years the Journal of the South Carolina Medical Association had been sent to senior medical students and to interns and residents in approved hospitals by courtesy of the Eli Lilly Company. This practice was to be discontinued, but a motion was made and carried that the South Carolina Medical Association continue with this policy until another sponsor was found.

After some discussion of the policies of the Association regarding savings and investment programs, it was moved and carried that the Chairman of Council be directed to appoint a committee of three to study the financial and investment policies of the Association and to report to Council in May 1959.

Dr. R. L. Crawford then presented a proposal for a Public Relations program for the Association, prepared by Withers and Newman. A general discussion followed after which this matter was referred to the Committee on Publicity, Dr. J. I. Waring, Chairman, Mr. Meadors, Dr. Wilson, to be augmented by the inclusion of Drs. Crawford and Weston.

Dr. G. D. Johnson, President of the South Carolina Medical Care Plan, reported that the financial condition of the Plan was much better than it had been a year ago, and it was suggested that the information contained in his report be incorporated in a letter to Councillors so that they might carry it to their respective county societies. Dr. Johnson was given the sincere thanks of Council for his excellent report.

The following interim report was received from the Committee appointed to study the position of the medical profession in South Carolina regarding Social Security, submitted by Dr. Ben N. Miller, Chairman.

This committee met in Columbia on November 16, 1958, the following members being present: Dr. George D. Johnson, Dr. Thomas Parker, Dr. Cathcart Smith, Dr. Ben N. Miller, Chairman. Dr. L. S. Miles was unable to attend because of professional responsibilities.

After an extensive discussion by the members of the committee regarding their personal feelings, they then indicated the facts that they had ascertained by questioning the members of the medical profession in their area. After many facets of the problem were discussed, a motion by Dr. George D. Johnson was made as follows: The Committee on the Study of Social Security for Doctors recommends that Social Security

be disapproved at this time. The reasons are listed as follows: (1) Under the present system, payments for Social Security will be borne by future generations; and on this basis it is morally wrong. (2) Social Security is financially unsound. There is no contract. There is no relationship between the amount of money paid in and what is to be received. (3) If Social Security is accepted by the physicians, the profession will be liable to socialized medicine in its most vicious form.

This above motion was made by Dr. Johnson and seconded by Dr. Parker, put and carried by unanimous vote.

It is the committee's feeling that both sides of the problem of Social Security should be presented to the doctors and that Council make the following recommendations: (1) That basic information be supplied to the members of the South Carolina Medical Association, (2) That a plan of polling by mail be carried out to get a sampling of membership opinion, (3) That a formal hearing before committee prior to the annual meeting of the Association be held with ample time for discussion by those for and against the system.

A motion to adopt this report was approved, and the committee was requested to follow through with this recommendation and extended the sincere thanks of Council. The Executive Secretary was asked to cooperate in the plan of polling the membership of the Association.

It was reported by Mr. M. L. Meadors that a new Medicare contract had been signed and the fact was to be called to the attention of the House of Delegates that Medicare does not remunerate radiologists, pathologists and the like whose work is charged for by the hospital.

A proposed fee schedule of industrial compensation, under the terms of the Workman's Compensation Law, was presented and given the approval of Council.

A proposal from Dr. R. W. Ball, Director of the Division of Venereal Disease Control of the State Board of Health, regarding the sponsorship of programs on this subject to be held in various centers throughout the state in the spring of 1959 was approved by Council.

A report from Dr. Ben N. Miller recommending minimal physical and mental requirements for obtaining drivers licenses in the state was read and received as information.

A letter addressed to Dr. John Fleming was reported to Council requesting action by the South Carolina Medical Association regarding the administration of free immunization shots to private patients. It was noted that the House of Delegates had approved this matter in principle at the May 1958 meeting and the Secretary was directed to send another copy of the resolution to the State Board of Health.

Dr. William Weston, Jr. reported that he could not attend the Minneapolis session of the American Medical Association in December 1958, and as his alternate, Dr. Wilson, was likewise unable to attend, Dr. C. N. Wyatt was approved as acting Delegate from the State Medical Association to this meeting.

The Chairman pointed out that in regard to the matter of the Duke Endowment furnishing nursing consultants to various hospitals on request, the resolution adopted by Council earlier in the meeting, that the matter had been approved by the House of Delegates in May 1958 and that a thorough investigation had been made by Mr. M. L. Meadors before he presented the resolution adopted by the S. C. Hospital Association.

Council then elected the following for the calendar year 1959. Editor of the Journal—Dr. J. I. Waring; Executive Secretary—Mr. M. L. Meadors; Treasurer—Dr. J. H. Stokes.

There was no further business and Council adjourned at 7 p. m.

Respectfully submitted,
Robert Wilson, M. D., Secretary

REPORT: ADVISORY COMMITTEE, "MEDICAL STANDARDS FOR DRIVER CERTIFICATION"

At the request of Mr. Claude R. McMillan, Chief Highway Commissioner of South Carolina, Dr. D. Lesesne Smith, President of the South Carolina Medical Association, appointed a "Committee to study minimal physical and mental requirements for obtaining drivers' licenses" in January, 1958. This Medical Standards Committee was appointed as follows: Dr. Ben N. Miller, Chairman; Dr. Tucker Weston; Dr. William Morehouse; Dr. Shepard Dunn; and Dr. O. B. Mayer, Ex-officio.

Dr. O. B. Mayer is a member of the Executive Committee of the South Carolina Highway Safety Committee representing the medical profession.

As a member of the House of Delegates of the South Carolina Medical Association, Dr. O. B. Mayer introduced in the May, 1958, meeting the following motion: (1) That the age of issuance of drivers' licenses be increased from fourteen to sixteen years, (2) That periodic examination of drivers be required to retain licenses. This motion was voted on favorably by the House of Delegates.

The members of the Medical Standards Committee have studied present South Carolina Highway Department medical standards and have made detailed inquiries through various national medical and safety groups. The following conclusions have been made: (1) That drivers' re-examinations at designated intervals are mandatory if workable, minimal standards for issuances of licenses are to be applied, (2) That re-examinations should be on a simple certified questionnaire basis. Applicants indicating no impairment will have a re-issuance of driver's license by the usual departmental procedure. Those applicants who are suspected of having an impairment, either by departmental records or by an affirmative reply to the

questionnaire, will have a medical evaluation before being re-certified for issuance of driver's license.

The Medical Standards Committee will proceed with its study and will recommend a standard procedure for evaluating individual cases in accordance with an acceptable uniform code.

The Medical Standards Committee recommends the following:

1. Renewal of driver's license be put on a periodic basis, and renewed only upon satisfactory evidence of physical and mental fitness as determined by an appropriate questionnaire.
2. The above are in addition to tests of driving skill and knowledge of driving regulations.
3. Applicants meeting requirements have licenses renewed promptly.
4. Substandard applicants be required to submit medical evidence of their fitness to safely operate a motor vehicle.
5. Falsification of statements will delay renewal or forfeit the privilege of renewal, depending on circumstances.
6. That a guide setting forth minimum mental and physical standards be prepared for examining physicians.
7. Raise minimum driver's age from 14 years to 16 years because of undesirable social and medical consequences.

Respectfully,
Ben N. Miller, M. D.
Chairman

Dr. William Morehouse Dr. Shepard Dunn
Dr. O. B. Mayer, Ex-officio Dr. Tucker Weston
9 September, 1958

CORRESPONDENCE

Dr. Joseph I. Waring

I am writing to put before you several items of importance that the A. M. A. House of Delegates feels the state associations should take a lead in at once.

First, by far the most important, is old age medical care. It has been recommended that each state association, working with its local Blue Shield, work out some method of caring for persons over 65 who have limited resources. It has been suggested that physicians agree to accept a smaller fee for services to people over 65 who have a smaller income. Another way, in the future, is for Blue Shield subscribers to pay a little more during their earning years and be assured of medical care after 65 when income is reduced. Cathcart Smith attended the conference on Ageing and I'm sure is familiar with all these ideas. Governor Freeman of Minnesota made it unmistakably clear that unless physicians take a constructive attitude, and soon, the government will. He gave the following startling facts that apply to South Carolina as well as to Minnesota. In the next 10 years the age group under 21 will increase by 25%; the 21 to 65 group by only 9%; and over 65 by 35%. The income producing group will increase only 9% and the over 65, the usually retired group, by 35%.

The A. M. A. House of Delegates memoralizes the component medical associations "to make every effort to provide a type membership for military, public health, and veterans' admnistration physicians which will enable them to become active members of constituent societies and of the American Medical Association".

The House of Delegates encouraged further study of the *"Hometown Medical Care Program For Veterans"* and urged that all medical societies at all levels develop committees to assist in guaranteeing V. A. Hospital admissions for (1) service connected cases and (2) those cases where an illness constitutes an economic disaster which would justify care by a V. A. Hospital.

The House further recommends that each state association continue its studies in the field of medical care of the indigent.

Since there is no way for officers of the A. M. A. to know who is interested in *Medical Practice* and *Plans* it is urged that someone in the state association inform Dr. Blasingame who in the state should receive the Report of The Commission on Medical Care Plans. These are expensive, The A. M. A. wants all interested parties to have one but sees no reason to send them to parties not interested.

In the legislative field, of fifteen bills involving medicine enacted into law, only one was opposed by the A. M. A. In its statements to Congress the Association was supporting the legislation or principle involved on 19 occasions and was in opposition on only six occasions. It is important for physicians and members of legislature to realize that the A. M. A. isn't against every medical bill introduced in Congress.

The A. M. A. House of Delegates further recommends that each state conduct a relative-value study in its own state rather than depend on a nation-wide study.

If there is any further information that Charlie Wyatt or I can supply please let either of us know. Charlie replaced "Bully" Weston at the Minneapolis meeting. We both agreed that not 2% of the physicians in South Carolina realize the urgency and importance of what is going on in the A. M. A. headquarters and in Congress.

Sincerely yours,
George D. Johnson, M. D.

BLUE CROSS . . . BLUE SHIELD

When the number of hospital beds available in a community or when the ancillary facilities of a hospital materially exceed the community's needs, there arises unfortunate expense of hospital operation. As a result there is a definite temptation to encourage overutilization of the hospital and its facilities. Hospital management, the professional staff and the people all feel the urge to support their hospital to the utmost.

When the hospital beds are constantly filled and when there are times when a patient has to wait for a bed, there arises a demand for hospital enlargement.

The building of hospitals has come to be community projects. The money is raised by a bond issue and is repaid by taxation. Therefore, every tax paying citizen becomes a partner in the venture. If the need for more beds has not been miscalculated or if the need for new ancillary facilities is real, there can be little legitimate complaint, provided the money is spent with due care.

However, the public is a poor judge of what and how much increased hospital facilities are needed. It should be the duty of the medical profession and of hospital management to direct public opinion wisely. To do that requires more than a review of the daily and the average patient load.

The Sacred Heart Hospital of Allentown, Pa. has 400 beds. Early in 1956 it was found that reservations for admission when beds became available numbered about 100 at all times. Elective cases had to wait for six to eight weeks before they could be admitted. In April, the staff, with the approval of the Executive Board, set up a Committee on Admissions, Conduct, and Discharges. This committee was directed to study the problem of bed shortages and to create rules and regulations to correct them. More important, it was directed to enforce the rules which it made. It was given authority to examine patients and their charts, and to attempt to ascertain whether or not hospital care had been indicated and whether or not the degree of urgency of the case had been up graded.

The committee found about 10 per cent of the hospital beds occupied by patients with hospital and medical insurance who were in for diagnostic check-ups or for minor surgery which could have been done on an out-patient basis. The committee came to believe that some doctors preferred to treat patients who had health insurance in the hospital and that these doctors were inclined to allow their patients to remain in hospital longer than necessary. It found that patients were often in the hospital for days before consultations were culminated. It found some "boarders" who required or desired domiciliary care, but who did not need the care provided by an acute disease hospital.

It was customary to write discharge orders late in the day. This prevented admission of elective cases that day.

The committee prepared a chart for priority of admission. Emergent cases were divided into three groups: critical cases, which were to be admitted immediately regardless of beds; serious cases, which were to be admitted within three hours; and urgent cases, which were to have priority over all other cases except the critical and the serious cases. Types of cases falling in the respective groups were tabulated. Before a patient could be admitted as an emergent case, the doctor had to give the admitting clerk a diagnosis which was listed in one of these groups.

The committee met every morning to check admissions of the preceding 24 hours, to advise the admitting clerks as to the order of admission of listed cases and to check the degree of need for hospital care of cases in the house.

Consultations were ordered expedited. Doctors were asked to transfer patients, whom they expected to transfer to another doctor, before admission rather than after. Orders for x-ray examinations were to be made a day in advance of admission when possible so that hospital beds would not be occupied by patients waiting for such examinations. Two daily check-out hours were set and enforced. An earlier hour saved payment for a half day, the later required a full day's cost.

The house staff and floor nurses were required to notify the committee of patients who they thought could be discharged. All "boarders" were discharged to nursing homes, sanatoria or to their own homes.

During the first year, there was a 6 per cent increase in patient days and an 8 per cent increase in patient admissions. However, there were still too many patients entering hospital to avoid paying for x-ray and laboratory examinations, and there were still too many doctors who hospitalized patients who requested it or because they carried insurance that paid the doctor for hospital calls. It was found that people with health insurance unconsciously tended to develop a greater than normal concern about their health.

Dr. Kenneth W. Taber, who was chairman of the committee and who discussed the Allentown plan at the meeting of the Medical Society of the State of Pennsylvania in September, 1957, stated that the success of the program was due to the cooperation of every member of the staff and of the administration. He believed that the committee could accomplish

little without such cooperation. In summing up his discussion he stated, "There is nothing further that the staff can do to solve this problem (creating active beds for new patients), and we cannot expect the patients to solve it. All that the hospital can do is to follow . . . the idea of constructing a separate building or wing for ambulatory patients undergoing study, minor treatment or convalescence. This wing would simulate a hotel with ordinary furniture and with dining rooms or cafeterias, all of which would cut down the cost of construction and material by 50 per cent or more and would reduce the payroll of such patients' nursing and waitress services by more than 60 per cent. We cannot expect hospitals to jeopardize their relations with the insurance carriers or staff members by enforcing rules which make the patients pay their own bills."

Dr. Taber believed that insurance carriers will have to help solve the problem of overutilization or improper utilization in order to save themselves and their policy holders unnecessary hospital costs by including in their contracts a $25.00 deductible feature or by limiting the contracts to low income groups. He suggested that all health insurance carriers require proof of need for hospitalization by having attending physicians sign statements as to why the patient had been hospitalized, whether for diagnostic studies or for treatment of disease. He believed that hospital admissions would be reduced about 10 per cent if Blue Cross and Blue Shield would agree to pay for x-ray examinations of out-patients. Although Dr. Taber did not say so, his statement indicates that his committee's studies revealed that about 10 per cent of patients admitted to Sacred Heart Hospital came for general diagnostic surveys.

The insurance commissioners of a number of states have become seriously concerned about the increasing costs of hospital insurance. They feel that the increases would be unnecessary if hospitals, doctors, and insurance carriers would cooperate fully in an effort to decrease overutilization and improper utilization of health insurance and to reduce or eliminate unnecessary in-hospital examinations done either for convenience or in order to get them done without cost.

Some South Carolina doctors have been insistent that Blue Cross begin some method of inspection of hospital admissions in order to discourage abuses of insurance contracts. Blue Cross management believes that such inspection is a matter which would have to be handled by the hospitals and their professional staffs. The experience in Allentown would seem to substantiate that belief. Protection of Blue Cross from abuse should be an obligation of doctors and hospitals. Without such protection, it is helpless to contain utilization within the provisions of the contract and to keep insurance costs down to a reasonable figure. If each hospital were to have a working staff committee similar to the committee at Sacred Heart Hospital, with power to make and enforce rules against unnecessary hospital care, there would result a very substantial decrease in improper utilization of hospital facilities and would limit the need of ever increasing bed capacity. This would decrease insurance costs to the public and building expense to the taxpayer, without lessening the quality of sickness care.

J. Decherd Guess

"THANKS, DOC, I MUST BE RUNNING ALONG NOW."

ANNOUNCEMENTS

ANNUAL SEMINAR CARDIOVASCULAR DISEASES
Jacksonville, Florida
February 19, 20, 21, 1959

The Sixth Annual Seminar on Cardiovascular Diseases will be held on Thursday, Friday and Saturday, February 19-21, 1959, at the Prudential Auditorium in Jacksonville, Florida. This course is sponsored by the Northeast Florida Heart Association in cooperation with the Division of Postgraduate Education of the College of Medicine of the University of Florida. This Seminar has been accepted for credit by the American Academy of General Practice.

The speakers for the course are Dr. Samuel A. Levine, Dr. Irving S. Wright, Dr. A. G. Morrow, Dr. Victor A. McKusick, Dr. Max Michael, Jr., Dr. William J. Taylor, and Dr. Myron W. Wheat, Jr.

This course will include recent developments in the diagnosis and treatment of Cardiovascular Diseases. The formal lectures will be correlated with panel discussions and question periods in which the entire staff will participate.

Information may be obtained from Dr. Daniel R. Usdin, M. D., Chairman, Cardiovascular Seminar,

Northeast Florida Heart Association, 1628 San Marco Boulevard, Suite 7, Jacksonville 7, Florida.

American College of Allergists Graduate Instructional Course and Annual Congress, March 15-20, 1959, Mark Hopkins Hotel, San Francisco, California. Contact, John D. Gillaspie, M. D., Treasurer, 2049 Broadway, Boulder, Colorado.

POSTGRADUATE COURSE ON DISEASES OF THE CHEST

We wish to announce that the Council on Postgraduate Medical Education of the American College of Chest Physicians will present the 12th Annual Postgraduate Course on Diseases of the Chest at the Sheraton Hotel, Philadelphia, March 30 - April 3, 1959.

The most recent advances in the diagnosis and treatment of heart and lung diseases, medical and surgical aspects, will be presented.

Tuition for this five-day course will be $100, including luncheon meetings.

Further information may be obtained by writing to the Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

VANDERBILT UNIVERSITY MEDICAL CENTER

Second Postgraduate Course in
PEDIATRICS
Sponsored by
American Academy of Pediatrics
March 17, 18, and 19, 1959
Nashville, Tennessee

THE SOUTHEASTERN SURGICAL CONGRESS

Twenty-Seventh Annual Assembly
March 9, 10, 11, 12, 1959
(Monday, Tuesday, Wednesday, Thursday)
DEAUVILLE HOTEL
MIAMI BEACH, FLA.

NEWS

At the Southern Thoracic Surgical Association held in Miami, Fla., on November 28th, Dr. Edward F. Parker was elected president for 1958-59.

DR. HANCKEL ELECTED

At the recent meeting of the Executive Committee of the Alumni Association held at the time of Founders' Day, Dr. Richard W. Hanckel of Charleston, S. C., was appointed secretary-treasurer of the Association to take the place of Dr. Joseph P. Cain, Jr., of Mullins, who had asked to be relieved of his duties. Dr. Cain has faithfully served the Association in this capacity for the past eleven years.

DR. PETTIT INSTALLED BY SOCIETY

Five Physicians Honored By Medical Group

The Charleston County Medical Society has installed Dr. Harold S. Pettit as president for the coming year.

Other officers installed were Dr. George G. Durst, vice president, and Dr. R. Maxwell Anderson, secretary-treasurer.

Five members of the local group were recognized for their length of membership in local, state and national organizations.

Dr. William H. Prioleau and Dr. Louis S. Miles were elected to honorary membership in the Charleston County Medical Society. Dr. Leon Banov and Dr. C. D. Boette became honorary members of the South Carolina Medical Assn., and Dr. M. W. Beach was selected as an honorary member of the American Medical Assn, as well as the county and state organizations.

DIVISION OF PUBLIC HEALTH NURSING CREATED IN PHS

The Division of Public Health Nursing was created in the Bureau of State Services of the U. S. Public Health Service following approval on August 15, 1958, by HEW Secretary Fleming of Surgeon General Burney's recommendation for its establishment.

Public health nursing represents the largest single group of professional public health workers in the United States and is a vital factor in contributing to the total public health movement.

The new Division has two branches: one concerned primarily with training and career development, the other with research. The staff will plan and conduct research projects and field studies in relation to public health nursing practice.

Chief of the new Division is Margaret Arnstein. Zella Bryant is Division Deputy Chief, Frances E. Taylor is in charge of Training and Career Development, Doris E. Roberts is in charge of Operational Research, Marion Ferguson is Consultant in Studies, and Mary Vesta Marston is Consultant in Operational Research.

Dr. Louis A. Johnson and family of Cheraw, South Carolina are locating in Graniteville. He opened his office in the Masonic Center on November 3.

Dr. Johnson entered the Citadel in 1945 and was called into military service in April, 1946.

After serving as a medical technician in the European theater and in Greenland, he was honorably discharged in November, 1947.

He re-entered the Citadel and graduated in June, 1951. He entered the Medical College of South Carolina and graduated in 1955.

In July, 1955 he began his internship in the University Hospital, Augusta, Georgia and finished this course of studying in June, 1956. Dr. Johnson has

been practicing in Cheraw, South Carolina for the past two years.

Louis M. Palles, M. D. announces the opening of an office for the practice of Gynecology and Obstetrics, 492 W. Cheves Street, Florence, South Carolina.

Julian P. Price, M. D. and Walter Moore Hart, M. D. announce the removal of their offices to 248 South Irby Street, Florence, South Carolina. Practice limited to Pediatrics.

PHS SEES AIR POLLUTION AS DISEASE FACTOR

Public Health Service, issuing a report in advance of the National Conference on Air Pollution November 18-20, stated that it appears likely that the medical effects of air pollution are not confined to the respiratory and circulatory systems. Epidemiological and statistical studies show parallels between air pollution and mortality rates from cancer of the stomach and esophagus, similar to those from lung cancer. PHS also made the point in its report that mortality rates for lung cancer among urban dwellers are significantly higher than among strictly comparable rural groups, smoking habits notwithstanding.

On the economic effects of air pollution, PHS said that it is quite apparent that the estimated third of a billion dollars now spent for prevention is out of line with the estimated $4 billion spent for neglect. "More money put into the asset side would remove several times as many dollars from the debit side."

The following applicants from South Carolina for Fellowship in the American Academy of Pediatrics were taken into the Academy recently.
Mauldin Joe Boggs, Abbeville, S. C.
Joseph Earle Furman, Greenville, S. C.
William Belser Gamble, Jr., Charleston, S. C.
Gilbert Flowers Young, Charleston, S. C.

FLEMMING CITES AMA JOINT EFFORT AGAINST FOOD FADDISM AND QUACKERY

HEW Secretary Flemming reports a "disturbing increase" in quackery involving false and misleading claims for a variety of vitamins, minerals and other food supplements. Operations in this field have become the most widespread and costly form of medical quackery in the country today, he told a press conference. He quoted an American Medical Association estimate that such operations are costing 10 million Americans over $500 million a year.

The Secretary reported that Food and Drug Administration had 350 inspectors but that they were not enough. In fighting quackery, law enforcement, of course, is only part of the answer. It is perhaps even more important to help the public understand the facts about nutrition and to warn people against false claims and theories," he commented. 'In this connection I cannot commend too highly the educational program against food faddism and quackery being sponsored by the AMA, the National Better Business Bureau and the FDA." In October, AMA distributed a comprehensive campaign kit to secretaries and executive secretaries of state and county medical societies to help them organize local drives against food faddism, which AMA noted was spreading throughout the country with "alarming speed."

Dr. Julian P. Price of Florence has been named by Surgeon General LeRoy E. Burney of the Public Health Service as a member of his consultant group in medical education.

Dr. Joseph P. Cain, Mullins, has been appointed by the Governor to fill the term of Dr. Frank Martin as a member of the Board of Trustees of the Medical College of South Carolina.

Dr. Kelly T. McKee, Charleston, has been elected secretary of the Section on Medicine of the Southern Medical Association.

Dr. J. W. Jervey, Jr. of Greenville has been elected a member of the Executive Committee of the Southern Medical Association.

Dr. Robert Wilson, Charleston, was elected vice-president of the St. Andrews Society at its November meeting in Charleston. Whether he attended the meeting attired in the conventional kilts and indulged in the pleasures of the haggis, the source saith not.

DR. McDANIEL MAKES CHAIRMAN'S ADDRESS AT SECTION OF SOUTHERN MEDICAL

"Physicians and Progress in the Public Health" was the subject of the Chairman's address by Dr. G. E. McDaniel to the Public Health Section during the meeting of the Southern Medical Association in New Orleans from November 3 through 6.

Dr. McDaniel discussed the subject from his experience of 30 years in public health as county health officer and state epidemiologist. Physicians have devotedly and successfully aided man in his struggles against disease and death, he said. They have conquered many physical and mental problems, but changing populations and environments present new ones. Physicians must accept their responsibility for and actively exert leadership or even recapture some lost leadership in solving these new problems of the future.

DR. TOWNSEND APPOINTED NEW HEAD OF LABORATORY

Dr. Eleanor W. Townsend has been appointed Acting Director of the Laboratory of the State Board

of Health, according to an announcement by Dr. G. S. T. Peeples, State Health Officer. This appointment fills the vacancy recently created by the death of Dr. Harry F. Wilson.

Dr. Townsend has been Clinical Pathologist in the Board of Health's Laboratory since March, 1956, spending a considerable part of her time in the development of the virology service.

Born on Edisto Island, Dr. Townsend attended schools in Charleston County and in Columbia and received her pre-medical training at the College of Charleston. She received her M. D. degree from the Medical College of South Carolina and served internships at Mercy Hospital in Bay City, Mich., and Willard Parker Hospital in New York City.

She has served as Instructor and Associate in Clinical Pathology at the Medical College of South Carolina and as Assistant Professor of Pathology and Bacteriology at Emory University School of Medicine.

Dr. Townsend has been pathologist at the Kentucky Baptist Hospital in Louisville and Chief of Laboratory Services at the Veterans Administration Hospitals at Mountain Home, Tenn., and Salisbury, N. C.

She was on active duty in the U. S. Naval Reserve for two years and is now a Commander in the Naval Reserve in retired status.

Dr. Townsend is a member of the South Carolina Medical Association, the Southern Medical Association, the American Medical Association, the American Medical Women's Association, the American Society of Clinical Pathologists, and the College of American Pathologists.

November 21, 1958

FROM: G. S. T. Peeples, M. D., State Health Officer

SUBJECT: Haitian Voo-Doo Dolls, Carved from Cashew Nut Shells

We have received the following message, via telegram, from the United States Public Health Service, on the subject of Haitian Voo-Doo Dolls:

"The Public Health Service cautioned today that Haitian Voo-Doo Dolls carved from cashew-nut shells, imported and sold in this country as novelties and beverage "swizzle sticks", can have harmful effects on persons handling them.

"The Public Health Service said that analysis of the dolls revealed that the cashew nut heads contain a shell liquid chemically similar to the oil in poison ivy.

"Volunteers at the Services occupational health field headquarters at Cincinnati who were tested with pieces of the shell developed blistering skin reactions within 35 to 50 minutes.

"Possibly even more dangerous than the cashew-nut heads, the Public Health Service said, are the dolls eyes, which are believed to be lethal jequiity beans.

"The Service reported that animal tests indicate that one of the eyes taken internally by a baby could cause serious and possibly fatal illness.

"The Public Health Service study followed a recent allergic outbreak involving 50 students in an Atlanta, Georgia, high school.

"Dr. Harold J. Magnuson, Chief of the Services Occupational Health Program, immediately informed the Haitian Embassy of the problem and was told by officials that their government would be asked to stop shipment of the dolls to the United States. It is believed, however, that a substantial number of dolls have already been sold in this country, and extreme caution is urged in the manner in which they are used.

"The trouble has arisen only in connection with cashew-nut dolls, the Service said. Similar dolls carved from coffee beans do not present this problem. A cashew-nut shell is kidney shaped and is an inch or more long and about 3/4 of an inch broad. Coffee beans are a great deal smaller."

The telegram is signed by Dr. David E. Price, Chief of the Public Health Service Bureau of State Service, and we are sending it for your information and guidance.

A.M.A. TO SPONSOR THREE MEDICOLEGAL MEETINGS

The American Medical Association announced today that another series of three regional medicolegal conferences will be held next March and April as part of a continuing effort to create a better working relationship between lawyers and doctors.

Dates and locations for the conferences are: at the District of Columbia Medical Society headquarters, Washington, March 20-21; at the Hotel Cleveland, Cleveland, April 4-5, and at the Hotel Utah, Salt Lake City, April 18-19.

The three conferences, sponsored by the A.M.A. Law Division in cooperation with state and local medical societies, will draw doctors and lawyers from surrounding states. While most of the participants on each program will be from out of the state, local speakers will also appear. Between 250 and 400 persons are expected to register for each meeting.

While the program for each meeting will not be completed until after the first of the year, it has already been decided that the following subjects will be covered in speeches and question-and-answer periods: narcotic addiction, traumatic neurosis, Res Ipsa Loquitur and medical professional liability, contingent fees and impartial medical testimony.

At each of the meetings the sessions will be presented for a half day on Friday and a full day on Saturday. Luncheons will be served each Saturday with no planned program on Friday night.

The registration fee for each conference will be $5 to cover the cost of the luncheon and a copy of the proceedings. Advance registrations should be mailed to the Law Division, American Medical Association, 535 North Dearborn Street, Chicago 10.

THE ATLANTA GRADUATE MEDICAL ASSEMBLY IS SCHEDULED FOR FEBRUARY 16, 17 & 18, 1959 IN THE USUAL PLACE ATLANTA BILTMORE HOTEL, ATLANTA, GA.

The Speaking Faculty is extensive. I am sure you will agree that it would be difficult to find a more accomplished, authoritative, renowned or provocative faculty group for any graduate meeting.

This year's (1959) program promises to present the most versatile, well-rounded, comprehensive and interesting schedule so far. More of the Luncheon Conferences and Afternoon Roundtable Seminars (which have proven to be such popular sell-outs in the past) have been added.

A splendid menu of social and entertainment events for the visiting ladies has been arranged by the Fulton County Medical Society Auxiliary. Atlanta is a city of fashion, theater, clubs, entertainment, and beautiful homes.

There are also a few entertainment (as well as educational) "extras" added to this year's program for the doctors which we guarantee will send you home happy and satisfied. Come see.

MARK IT ON YOUR CALENDAR. Start planning *NOW* to attend the biggest, best-all-around graduate assembly yet.

JOHN S. ATWATER, M. D.
Chairman

Atlanta Graduate Medical Assembly is endorsed for 15 hours in Category I by the G.A.G.P.

SOUTH CAROLINA HEART ASSOCIATION ANNUAL MEETING

Monday, February 2, 1959
Baruch Auditorium
Medical College of South Carolina
Charleston, S. C.

Scientific Program
Dr. George Wilkinson presiding.

8:30—Registration

9:00—Dr. Dale Groom, Assistant Professor of Medicine, Medical College of S. C. "Coronary disease in the Negroes of Haiti and the United States."

9:15—Dr. Edwin Boyle, Associate in Medicine, Medical College of S. C. "Clinical significance of blood sludging in vascular disease." (With movie).

9:30—Dr. Edward Massie, Associate Professor of Clinical Medicine, Washington University Medical School, St. Louis. "Infarction occurring in bundle branch block."

10:30—Dr. Peter C. Gazes, Assistant Professor of Medicine and Pharmacology, Medical College of S. C. "Plasma catechol amine concentrations in myocardial infarction and angina pectoris."

10:45—Dr. Thomas D. Darby, Assistant Professor of Pharmacology, Medical College of S. C. "Studies of the changes in cardiovascular dynamics during angina pectoris and nitroglycerin therapy."

11:00—Dr. Joseph E. Murray, Director, Surgical Research Laboratory, Harvard Medical School, Boston. "Clinical and experimental homotransplantation of skin, kidney and bone marrow."

12:00—Annual meeting of voting members of S. C. Heart Association. Lunch.

Dr. R. Cathcart Smith presiding.

2:00—Dr. Jerome S. Harris, Professor of Pediatrics, Duke University Medical School, Durham. "Rheumatic heart disease in childhood."

3:00—Dr. A. Izard Josey, Columbia, S. C. "Experiences with serum cholesterol in an office practice."

3:15—Dr. John A. Boone, Professor of Medicine, Medical College of S. C. "The coincidence of patent ductus arteriosus and rheumatic heart disease, with a comment on the 'post-commissurotomy syndrome'."

3:30—Dr. Andrew G. Morrow, Chief, Clinic of Surgery, National Heart Institute, Bethesda. "The correction of congenital and acquired heart diseases with the aid of extracorporeal circulation."

4:30—Dr. Wendell B. Thrower, Assistant Professor of Surgery, Medical College of S. C. "Recent advances in the surgery of valvular heart disease."

4:45—Dr. Edward F. Parker, Clinical Professor of Surgery, Medical College of S. C. "The role of epinephrin and norepinephrin in rebound cardiovascular phenomena following azygos flow studies and cardiopulmonary bypass in dogs."

CHARLES F. KETTERING
1876 - 1958

Medicine has had few more devoted patrons and co-workers than Charles Franklin Kettering. "Boss Ket", as he was affectionately known to the thousands of people of General Motors, was an engineer whose contributions to the automotive age (the self starter, ethyl gasoline, high compression engines, diesel locomotives) won him renown as an inventor and a fortune estimated at many millions. A large share of that fortune, and also of his life, he devoted to medical research.

Writing on the occasion of the seventy-fifth anniversary of the American Medical Association he summed up the sense of kinship he felt for our profession: " . . . we must break down the boundaries between engineering and medicine . . . all of us, all the professions, are a part of one big work banding together to fight for every form of human progress."* He rebelled against pedagogical boundaries and the vocabularies of scientific jargon which separate workers with a common cause. His own achievements ranged through the fields of physics, chemistry and biology, in addition to his own. From his years of close association with physicians he learned much of medicine. And medicine can learn much from him.

"The Boss" had a genius for going to the core of a problem or an idea, reducing it to its least common denominator, and crystallizing his thoughts into "Ketteringisms" that reveal his pragmatist's philosophy. "In research the hard thing to recognize is that the problem you are working on is boss." Making a plea for an educational system which would teach students to "fail intelligently" he pointed out that "an inventor fails 999 times and if he succeeds once he's in." Most important, "the one time you don't want to fail is the last time you try."

If "Boss Ket" had a hobby it was debunking dogmas. "It isn't what we don't know that holds us back so much as the things we know for sure that are not so." He made a sharp distinction between formal education and learning. "Real progress", he believed, "is made by those who are quite different from educated people. Facing an inscrutable disease, the men who make progress do so because they tend to throw statistics out the window and start with simple reasoning." Big words seemed to him only a camouflage of ignorance: "People think that if they have a name for a thing they understand it." Perhaps in no field of science is that more true than in medicine, where there is yet so much to learn.

But his greatest disdain was for the egotist. "Just the minute you get satisfied with what you've got, the concrete has begun to set in your head." To him the real trouble with the world was that "A few men want to be big shots and make everyone else serfs."

Since retirement from the active directorship of General Motors Research a dozen years ago, his time was devoted chiefly to three consuming interests. One was the famed Sloan-Kettering Institute which he and G. M. Chairman-of-the-Board Alfred P. Sloan established for cancer research, an interest which was no doubt spurred on by the death in 1946 of his beloved "Mrs. Ket" of cancer. A second became known as his "why the grass is green" investigation—(he was always asking why)—into the fundamental mechanism of the storage of solar energy by plants. This project was recently housed in a large modern laboratory building built by the Kettering Foundation on the campus of Antioch College at Yellow Springs, Ohio. The third interest he had pursued for more than fifty years, ever since his boyhood wonderment on the mystery of how a magnet can exert a pull on another object through space. The textbook explanation of "lines of force" which he was taught in his student years at Ohio State University did not quell his curiosity, which was insatiable and recognized no boundaries. Few people were aware that the trim white buildings located inconspicuously behind an Ohio farmhouse a few miles out of Dayton contained instruments for neutralizing the magnetic field of the earth and delving into properties of magnetism as yet unknown.

The tempo with which he pursued these projects was staggering. He commuted regularly between his home and New York City, Yellow Springs, and Detroit where he retained a position of leadership in General Motors affairs long after his retirement. Nearly all this travel was accomplished by air; he maintained three airplanes of his own and relaxed by taking over the controls from his pilots and flying himself, proud of the fact that he was one of the first licensed pilots in the United States and used to fly with his neighbors, the Wright Brothers. Occasionally there was time for a flight to "Far Horizons", the retreat which he built atop a knoll on the farm where he grew up near Loudonville, Ohio, or to Alabama or Florida for work on other research projects. He was still maintaining this schedule when, at the age of 82,

* J.A.M.A. 167:1360, July 12, 1958

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• relieves *distress*

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new, well-tolerated agent for stabilizing emotions—
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for more specific control of functional gastrointestinal disorders, especially those aggravated by emotional tension.

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Dosage: One tablet three times a day.

Availability: Aqua-colored tablets containing 15 mg. of Pro-Banthine (brand of propantheline bromide) and 5 mg. of Dartal (brand of thiopropazate dihydrochloride). G. D. Searle & Co., Chicago 80, Illinois. Research in the Service of Medicine.

SEARLE

he died unexpectedly at home in Dayton, a few days before Thanksgiving.

Mr. Kettering was an earnest worker, a Lincolnesque story teller with a dynamic, yet warm and friendly manner. His modesty was genuine. His wealth, acquired in the best American tradition, he regarded as a means of contributing to the progress of mankind. Characteristically he looked not to past accomplishments but to the future "because that's where we are going to be spending the rest of our lives." About that he was always optimistic: "With willing hands and open minds, the future will be greater than the most fantastic story you can write. You will always under-rate it."

Dale Groom, M. D.

BOOK REVIEWS

DIAGNOSTIC LABORATORY HEMATOLOGY. Second Edition. By George D. Cartwright, M. D. Grune & Stratton, New York. 1958. 250 pages. Price $6.75.

This manual is a concise review of the routinely performed laboratory procedures in hematology and is written for the student and practicing physician. Although there are more exhaustive works on this subject, the present book fulfills a very real need in this regard.

The subject matter covers all phases of diagnostic hematology in an easily understandable form with excellent descriptions of all tests and recommendations of the best one in cases where several methods are available. Each procedure is followed by the very important, though frequently overlooked, "sources of error" as well as a discussion of the variation in a given determination that can be expected even with good technique. Although many of the tests described would not be done either by a student or a practicing physician, they are of great value in interpreting information reported by the hospital laboratory.

Dr. Cartwright, in his exhaustive work in hematology for the past fifteen years, is very well qualified to write such a book and it can be very highly recommended to both student and physician as a valuable reference work and guide to the simple, as well as more complex routine laboratory studies in hematology.

Charlton deSaussure, M. D.

DIABETES AS A WAY OF LIFE, T. S. Danowski, M. D. Coward-McCann, Inc. New York 1958. Price $3.50.

The most important feature in the management of a diabetic patient is the education of the patient. The more the diabetic knows about himself and his disease the better he gets along, and as an aid in the education of the diabetic this book is very useful. It is written altogether from this point of view, and explains many of the aspects of the disease in simple, non-technical language.

The best criterion for the usefulness of such a book is not for the physician himself to decide, but for the patient; I will therefore quote the comments of a patient who has read and reviewed the book himself:

"This book appears to me to be one book that lives up to its title, 'Diabetes As A Way of Life'. The author begins by showing that the diabetic is not alone but about two per cent of the population are diabetics. He then proceeds to discuss quite frankly the emotional aspects of the discovery of diabetics, the shock of its discovery, the frustration, and the difficulties encountered because of the psychological attitude of the new patient.

Dr. Danowski then deals with the various treatments and control of diabetes, always reassuring the patient that all is not hopeless, but that through proper understanding of the disease by the patient and the care of a competent physician, as well as a willingness on the part of the patient to accept his new way of life, that life can indeed be fruitful.

The writer does an excellent job of discussing acidosis and coma, insulin shock, and special problems in the life of a diabetic. It is my opinion that every diabetic should read these chapters. He answers many questions that plaque most diabetics and deals realistically with mental attitudes and expectations. The book is written in language that the average layman can understand."

The book is scientifically sound, does indeed contain a wealth of useful information, and can be recommended to the patient as a distinct help in his diabetic education.

Robert Wilson, M. D.

PSYCHOPROPHYLACTIC PREPARATION FOR PAINLESS CHILDBIRTH. Isadore Bonstein, M. D. Grune and Stratton, Inc., New York. 1958. Price $2.50.

This little volume represents still another effort on the part of obstetricians and gynecologists the world over to conduct pregnancy, labor, and delivery with minimal usage of drugs, either analgesics or anesthetics. From this standpoint, it has great value. Whether or not one wishes to espouse the psychoprophylactic method of painless childbirth, or the "childbirth without fear" method, or the method derived from hypnotism and suggestion is still a highly individual problem, both to patients and to obstetricians. The book is well documented, consists of several lectures on the subject of muscular relaxation and its relationship to the process of labor; but it is my opinion that it is much too technical to be of much value to the patients themselves, even with a rather close teamwork with the obstetrician and his various hospital assistants. The question of the minimal use of drugs during conduct of labor has plagued physicians for many years. Certainly one desires to make the experience of motherhood a great achievement for

the patient, and at the same time to lend that degree of assistance that will minimize the discomfort which must arise as a result of this physiological process. The manual is not suitable for patient education in my opinion.

Patricia A. Carter, M. D.

THE ESSENCE OF SURGERY, by C. Stuart Welch, M. D. and Samuel R. Powers, Jr. M. D. W. P. Saunders Co., Philadelphia, 1958. Price $7.00.

This book might have been titled as an introduction to surgery since it is a consideration of the entire field in a manner designed to appeal to the surgical beginner. The title is derived from the theme that there is a fundamental sameness to the relatively few different types of injury. The authors emphasize that the province of the surgeon is the management of acute injury and the same principles are used in the various branches of surgery.

The book is divided in three parts concerning the background of surgery, the major surgical injuries and operative surgery. The section on the background of surgery includes a short surgical history, a delineation of the surgeon's place in medicine and the response of the body to injury. The major surgical injuries are categorized as loss of body tissue, loss of body fluids and infections. Pre-operative and post-operative care are given their proper emphasis. The section on operative surgery presents a discussion on the basic procedures in surgical technique, rightfully but infrequently included in introductory texts. The classification of operative surgery into extirpative, reconstructive and physiologic should be helpful to the student in obtaining a elementary grasp of the art.

The subject matter of the book is thoroughly up-to-date and the role of the modern surgeon in a non-operative capacity is properly presented. Superficiality is difficult to avoid in such a comprehensive condensation, but the authors have done as good a job as any. One cannot envision interest in this book beyond the student level. It should serve well as a text in the introductory surgical lectures.

Louie B. Jenkins, M. D.

DISEASES OF THE ESOPHAGUS, by J. Terracol and Richard H. Sweet, W. B. Saunders & Co., Philadelphia and London, 1958. Price $20.00.

This work consists of about 600 pages of text, including 408 illustrations. There is an appendix on the composition of diets and tube feedings for patients with esophageal disease. Also there is a very exhaustive bibliography, though not complete, on all phases of the anatomy, physiology, the roentgenographic and endoscopic observations and diseases of the esophagus, the like of which cannot be found elsewhere in such a convenient form.

The work consists basically of a translation by Dr. Sweet, Associate Clinical Professor of Surgery at the Harvard Medical School, of the original work in French by Dr. Terracol, a Professor of the Faculty of Medicine of Montpellier, France. In addition, the treatise has been brought up to date, so to speak, to include newer knowledge and particularly principles and techniques involved in the surgical treatment of diseases of the esophagus. Whereas some of the opinions expressed are controversial, in general the book is certainly a splendid reference source for all diseases of the esophagus, representing the experience of two of the foremost authorities in this field. It can be recommended highly for the generalist and for the specialist faced with any problem concerning the esophagus.

Edward F. Parker, M. D.

CORRELATIVE NEUROANATOMY AND FUNCTIONAL NEUROLOGY. Joseph G. Chusid, M. D. and Joseph J. McDonald, M. Sc. M. D. 9th Edition, Lange Medical Publications—Los Altos, Calif. 1958. $4.50.

This is the ninth edition of Correlative Neuroanatomy and Functional Neurology since 1938 and this fact alone speaks eloquently for this excellent handbook.

It is difficult to fault this book which is intended for the beginner in neurology and as an aid to the text and neurological literature. In this it succeeds admirably. Yet it is a pity to see almost nine pages devoted to eponyms.

Some of these eponyms cannot lightly be discarded by reason of their admirable precision such as Hippocrates ominous sign in acute infection, but most should and could be eliminated and replaced by precise titles in terms of pathology. The nightmare of eponyms grows when the names become hyphenated as in the Laurence-Moon-Biedl syndrome; if we are to be just to all of these clinical observers of syndromes as Shapiiro states about the Laurence-Moon-Biedl syndrome this familial idiocy should idiotically be designated the syndrome of Laurence-Moon-Bardet-Biedl-Solis-Cohen-Weiss.

B. O'Connor, M. D.

CIBA FOUNDATION SYMPOSIUM ON THE CEREBRAL FLUID, Editors: Cecelia O'Connor, B. Sc., and G. E. W. Wolstenholme, M.B.B.Ch. Little, Brown & Co. Boston 1958. $9.00.

This symposium is a welcome edition to the American library where such excellent books as Elliot-Page and Questels "Clinical Dynamics of Brain and Neurology" discuss the intra-cranial fluids and so often do not consider or compare their views with quite opposite views held elsewhere in the world. In this review, in the manner unique to the Ciba Foundation Symposia, the fundamental considerations of the cerebral spinal fluid are discussed by international authorities and co-related with clinico-pathological observations to determine the most rational modes of treatment.

E. R. A. Cooper's contribution to the nerves of the meninges and choroid plexuses is of special interest

and beautifully illustrated and from her work it appears reasonable to assume that the majority of the meningeal and choroidal nerves are so closely associated with vessels that they are predominantly vasomotor in function; this may prove to be the key to the mechanics of the concussion and de-acceleration head injury headache.

Many basic problems are left unanswered and with contradictory opinions; this is a certain stimulus to more intense work and we hope that it will not be long before Ciba will hold a further meeting on this basic problem of clinical medicine.

B. O'Connor, M. D.

REHABILITATION IN INDUSTRY. Donald A. Covalt, Editor—Grune & Stratton, New York, 1958. $6.50.

This is the third in a series of "Modern Menographs in Industrial Medicine". It consists of eleven fairly brief but generally well written chapters by different authors. Various types of frequent industrial injuries such as amputations, soft tissue injuries, peripheral nerve lesions, back injuries, and several others are discussed. Emphasis is placed on the necessity of a specific treatment program from the time of injury to the time of maximum recovery and return to work. The importance of psycho-social and emotional aspects, especially in low back injuries, is presented somewhat briefly. The final chapter is devoted to vocational placement of those with permanent disability.

This is a well prepared book and offers a clear concept of the overall problems of rehabilitation in industrial cases as well as specific forms of therapy.

Harry W. Mims, M. D.

ACTION OF RADIATION ON TISSUES—AN INTRODUCTION TO RADIOTHERAPY by A. La Cassagne, and G. Gricouroff. Second Edition. Translated by Clarence C. Lashbaugh, M. D. and Gretchen R. Riese, M. S. 200 pages. Grune and Stratton, Inc., New York, 1958. Price $6.25.

This book is essentially a compilation of abstracts of early observations and experiments concerning the biological action of ionizing radiation. It is valuable as a history, and as a reference book if one wishes to determine how present conceptions of body reaction developed. The research reviewed and condensed was done chiefly from 1900 to 1940. Those wanting to review a phase of radiation reaction will find it helpful as a guide, particularly in the European literature.

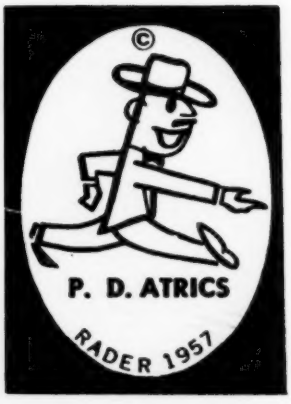
Unfortunately one cannot judge the accuracy and thoroughness of the work reported on, and some of it may prove to have been surprisingly superficial. The conclusions reached in this early research are interesting and informative, but specific findings should not be accepted without reading the original articles.

For example, Bergonie and Triboudeau in 1906 summarized the investigations up to that time and established three laws which stated that radiation acts more intensely on cells: (1) when the reproductivity activity of the cells is greatest, (2) when the mitotic process is prolonged, and (3) when differentiation and functions are less definitely established or fixed.

Recent work has cast considerable doubt as to the validity of this research and the resulting "laws" which have been accepted for over fifty years.

There is a need for a good textbook on radiotherapy for the radiology resident, but this does not seem to me to be it.

Harold S. Pettit, M. D.



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